THE

LONDON FLORA;

CONTAINING

A CONCISE DESCRIPTION OF

ALL THE PHÆNOGAMOUS BRITISH PLANTS

WHICH GROW SPONTANEOUSLY IN THE

VICINITY OF THE METROPOLIS, WITH THEIR LOCALITIES;

ARRANGED ACCORDING TO

THE NATURAL SYSTEM;

AND

A LINNÆAN ARRANGEMENT

OF ALL THE PHÆNOGAMOUS BRITISH SPECIES;

TO WHICH IS PREFIXED

A COMPREHENSIVE INTRODUCTION TO THE NATURAL METHOD

AND SYSTEM OF CLASSIFICATION,

AND A SKETCH OF BOTANICAL GEOGRAPHY.

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TO

JOHN SHEPHERD, Esq.

ONE OF THE DIRECTORS OF THE AFFAIRS OF THE

HONOURABLE EAST INDIA COMPANY,

THIS VOLUME

IS MOST RESPECTFULLY DEDICATED,

BY HIS OBLIGED AND HUMBLE SERVANT

THE AUTHOR.

PREFACE.

THE Publishers, and especially the Author, of this sketch of the Indigenous Botany of the Metropolitan District, beg leave to acknowledge their obligations to CAPTAIN JOHN SHEPHERD, of the East India House, for his kind encouragement and disinterested patronage of their work.

The labours of many years spent in collecting the London plants,—and the far greater and less agreeable task of arranging and describing them, would most probably have been lost in oblivion, but, for the generous and unsolicited assistance above-mentioned.

If the Author had permission, he would have much pleasure in publicly acknowledging his obligations to many friends, by whose efforts he has been greatly aided, in obtaining subscriptions.

Thanks are especially due to Mr. WM. PAMPLIN, Jun., of Lavender Hill, who generously supplied the Author with a great many rare and scarce plants, and most liberally allowed the free use of all his memoranda on Indigenous Metropolitan Botany. The readers of the London Flora will perceive, in almost every other page of "Descriptive Botany," how greatly his unwearied zeal, in the botanical investigation of this district, has enhanced the value of the present work. Also, to THOMAS RALPH, Esquire, Member of the Royal College of Surgeons, London, for a list of localities and several specimens of rare plants,—and, to the same gentleman, for kindly undertaking the trouble of assisting the printer, and correcting some of the proofs, &c. Also, to the Rev. GEORGE MUNFORD, of Lynn Regis, who sent a list of rare Norfolk species. To GOLDING BIRD, Esquire, M.D., Professor of Botany, Guy's Hospital, for several localities, which are acknowledged in the proper places.

The limits of the Flora of London, proper, are the English Channel on the South, as far West as Southampton; from thence, an imaginary line, passing Northwards, through Hampshire, Berkshire, Oxford, Buckingham and Northamptonshire, and thence to the sea on the East; but, with the exception of the Essex coast, the Author has no personal knowledge of the productions of the Eastern shores. He has introduced a few plants from Lincoln and Derby shires, which are beyond these bounds, but in hopes that they will be found in situations nearer London.

With a very few exceptions, the species described were collected in the specified localities, either by the Author or by the gentlemen afore-mentioned, whose names are recorded with their discoveries. He is, himself, personally, responsible for all localities where no authority is quoted, except in a very few instances where the discoverer's name was not known to him, as in XANTHIUM *strumarium*. Additional localities will be found in the Linnæan Arrangement for many plants that grow in the Metropolitan District, and are described in the portion assigned to the London species.

The Flora contains a very considerable number of unrecorded localities; and, it is hoped, that the attempt therein made to simplify and facilitate the acquisition of the natural method of studying plants, will be successful. The Tables annexed to this part of the work shew the number of Genera and Species growing in the Hampstead District, i. e. within two miles of Hampstead Heath, of which a Flora of about six hundred and fifty species of vascular plants was prepared; also in the London District, and, again, in the whole kingdom. This part of the work, imperfect as it must necessarily be, from the new discoveries, and the shifting and dividing of Genera and Orders, cost much more labour than any other, perhaps nearly as much as all the rest together. It is designed to show the great number of Exotic plants that can be referred to their proper Orders and Genera, provided the Ordinal and Generic characters of certain of the Hampstead species be known.

In the Arrangement of Orders, Dr. Lindley has been usually followed as the best and most recent authority. Sir Wm. Jackson Hooker's Flora is the chief authority for Names, and sometimes for the descriptions of the Genera and Species, it being the most useful and popular work on this subject. A few Genera of the late Sir James E. Smith's excellent English Flora have been adopted; and a very few from Dr. Lindley's Synopsis.

In preparing the outline of the progress of botanical arrangements, which is only a small portion of treatise on this subject, the works of the ancient botanists,—Theophrastus, Dioscorides, and Pliny, are the authorities for the state of botanical science in those times. The writings of Rivinus and Tournefort, Gesner, Cæsalpine, Morison, and Ray, shew the great advance made in the knowledge of plants, from the revival of learning down to the ages immediately preceding our own. The remarks on the geographical distribution of plants were abridged from a much larger compilation chiefly obtained from the works of the celebrated Baron de Humboldt, and, especially, from the work, *De Distributione Geographica Plantarum*, *Paris*, 1817, also, from Dr. Robert Brown's *General Remarks on the Botany of Terra Australis*, Appendix to Captain Flinders' Voyage; Captain Parry's Journals; Giesecke's Greenland Flora; the Floras of Spitzbergen and Iceland; the excellent Helvetian and Carpathian Floras of Dr. G. Wahlenberg; the Flora Capensis and Japonica of Thunberg; Forster's Australian Flora; Dr. Wallich's List of East Indian Species; and from the Oriental Flora of Drs. Wight and Arnott. The authorities for the numbers of known species, with either generic or ordinal types, in this country, are, chiefly Sprengel's *Species Plantarum*, and the published parts of Decandolle's *Prodromus*. Loudon's *Encyclopædia of Botany* was also resorted to for the same purpose.

It is hoped that the slight alteration in nomenclature will not be condemned. Indeed, an apology for changing the terminations of the ordinal and subordinal names is unnecessary, as no principle or method has, as yet, been generally adopted either for their formation or orthography. The generic names are left unaltered.

I have ventured to take some liberties with the specific appellations, viz., in writing them with a single initial, whether they be derived from generic names, or are commemorative of the discoverers, or other famous men.

I am also of opinion that a farther change would be productive of greater simplicity and consistency.

For example, the names of the species Bonus Henricus and Bursa Pastoris might be both simplified and also rendered expressive of some quality or property of the plant, by substituting *perenne* for the former, and *trivialis* or *trivia* for the other. The epithet *perenne* would express not only a quality, but a distinguishing mark, the rest of the British species of that genus being annual; *trivialis* would imply that the *Shepherd's purse* grows commonly in ways and in trodden places.

The specific names could be applied with more ease and greater readiness were every name indicative of a class, order, sub-order, genus, and species to be regarded as feminine; according to the common rule, viz., that the name of the individual, or particular thing, should have the same gender as the general word, *e. g.* the names of plants, ships, &c., are feminine, because the general appellatives *herba*, *navis*, &c., are so.

The names of species are either adjectives or substantives: to the former belong such as are expressive of the countries whence the plants have been imported, or in which they chiefly abound; as *Tamarix gallica*, French Tamarisk; *Anemone apennina*, the Apennine anemone, or anemone of the Apennines.—Locality (elevated): as *collina*, on hills; *montana*, on mountains; *alpina*, on lofty mountains; *alpestris*, on the higher parts of great mountains; *rupestris*, on rocky mountainous places. Locality (open): as *campestris*, on open plains; *arvensis*, in fields; *agrestis*, in cultivated fields; *pratensis*, in meadows. Locality (moist, or watery): as *palustris*, marshy parts; *uliginosa*, wetter parts of marshes, as ditches; *limosa*, in muddy watery parts; *aquatica*, in water; *natans* and *fluitans*, swimming and floating. Locality (shady): as *umbrosa*, shady parts in woods; *sylvestris*, in woods; *nemoralis*, in groves; *dumetorum*, in bushy places. Locality (by seas and rivers, &c.): as *marina*, by the sea; *rivalis*, on the river bank; *lacustris*, by or in the lake.

—Soil: as *arenaria*, on sand; *calcarea*, on chalk.

—Habit: as *convolvulus*, twining; *tortuosa*, twisted; *scandens*, climbing; *humifusa*, spreading on the ground; *procumbens*, bending forward; *flexuosa*, bent; *stricta*, upright, &c.

—Duration: *annua*, annual; *biennis*, biennial, &c.

—Size: as *major*, greater; *minor*, smaller, &c.

—General qualities: as *herbacea*, herbaceous, *fruticosa*, shrubby; *arborea*, arborescent.

—Specific qualities: as *amara*, bitter; *moschata*, musky.

—Form: as *triquetra*, three-angled; *teretiuscula*, tapering.

—Resembling parts of other plants; as *hederæfolia*, ivy-leaved.

—Expressive of some peculiarity in the florescence: as *racemosa*, in a cluster;—of the stem, as *fistulosa*, like a pipe;—of the leaves, as *angustifolia*, narrow-leaved;—of the root, as *bulbosa*, bulbous.

There is another sort of specific names which are neither so intelligible nor expressive as those above-mentioned, viz.,—signifying the likeness of the plant to some other, as *agrostidea*, *echioides*, and such like, meaning, like an *agrostis*, *echium*, &c. Some of these appellations, though significant enough, are not sufficiently euphonious, and are, besides, liable to the charge of being barbarous. The terms *echina* and *agrosta* might convey as much meaning as the present terms, and would be more readily pronounced and remembered. The latter denomination of specific names, viz.,—substantives, are either the genitive cases of common nouns or of proper names, commemorative of famous men, as *Smithii*, *Michelii*, &c.; a possessive adjective would equally express the property of the discoverers, e. g. Smithiana, Micheliana, or the like. The words *sepium* (of the hedges) and *fullonum* (of the fullers) might be changed into adjectives equally expressive of their properties.

These hints for an improvement of botanical terminology are offered with some diffidence, although there seems no insuperable objection to their partial adoption.

Lest the generic and specific descriptions should be thought too concise, it may be stated, that they refer only to British plants, and, it is believed, that the discriminating marks will be more useful than the essential characters. The chief object has been rather to point out the relations existing between genera and species, with their distinguishing characteristics, than to describe them individually. The ordinal characters are to be found in every genus (group of species), and, when the order of the plant is known, it will be easy, except in a few very large orders, to ascertain the genus to which the species belongs. The generic marks are, likewise, to be sought for in every species, and when the genus i determined, a few marks will, usually, be sufficien for the determination of the species. Therefore though the generic and specific definitions be brief, i is to be kept in mind that the ordinal character i part of the generic, and the ordinal and generic together, constitute the chief part of the character o the species.

The marks exhibiting the habit, duration, time o flowering, and the reference to a figure of the species will be found in the Index. Very few synonymous names are given, as they are more useful to th historical botanist than to the mere student of plants to whom this work is chiefly adapted.

It is probable that there are a few plants in th District assigned to the London Flora proper, whic I have not yet seen, and there may be others describe as growing here, whose claims, as natives of the metropolitan counties, are disputed. These deficiencies it is hoped, will soon be supplied by the investigation of botanists in their own immediate neighbourhoods They alone can determine what plants are indigenou what are only naturalized, or, what may be terme accidental.

As a proof of what remains to be accomplished i determining the number of species, and what are an what are not indigenous in any particular district, th Author begs leave to state, that, although he ha been studying the botany of this district (London) the greater part of fifteen years, and, during that time, resided in four different parts of Middlesex, besides London, in three parts of the county of Surrey, in Kent, in North and South Essex, in Hertfordshire and Hampshire, and also travelled to more distant places for some weeks every year, yet he is frequently discovering new stations of native plants in those parts where he has been resident, and in particular localities which he has been in the habit of visiting at stated periods. He hopes, that the deficiencies which he is unable to supply, will be supplied by others more acquainted with the subject, and whose avocations leave them leisure for such purposes; and that, by a concentration of their efforts, the Metropolitan District will eventually possess a Flora commensurate with its importance.

[illegible], 22nd August, 1836.

ADDITIONAL LOCALITIES.

Juniperus communis, on heaths between Dorking and Cold Harbour; also Taxus baccata, [illegible] between Box Hill and the residence of Mr. J. Bennet, Dorking. Hippocrepis comosa, Dorking chalk pits, plentiful, and certainly wild. Atropa belladonna, under the bank, on the road to Denbies from Dorking, [illegible] the gate up the hill, also in a chalk pit opposite Westgate Mill. I am obliged to my friend, Mr. Bennet, for showing me these localities. [illegible] *officinalis*, Chilworth side of St. Martha's Hill, on the verge of the cultivated land. [illegible] *armeria*, [illegible]—Miss Holman, Shere.

Vaccinium Myrtillus, lane between Shere Heath and Mr. Nash's. [illegible], in a grass and potato field beyond Mr. Bray's house, Shere, apparently wild. [illegible], pink and white varieties; field opposite Addiscombe College. Dianthus armeria, Woodside, near Croydon (Langley's farm). Verbascum *lychnitis*, in a pit, by roadside (left), on Mr. Mattson's farm, near Croydon pay-gate. I am indebted to my friend, Mr. Turner, for these Croydon localities.—Exacum *filiforme*. I received a specimen of this rare plant, gathered in Tilgate Forest, Sussex, from Mr. J. Hewson, Jun.

OMISSIONS.

P. 198.—Ribes *nigrum* (Black Currant).—Fruit large, black, on separate pedicels, in lax clusters. Leaves glandular, yielding a peculiar smell.
Woods, &c., not common.

P. 231.—Impatiens, *noli me tangere.*—About Shalford and Guildford, not rare.

ERRATA.

Page 2 line 1 *for* astival *read* æstival.
5 .. 1 *for* monopetalous *read* polypetalous.
13 .. 13 *for* Pelargonum *read* Pelargonium.
19 .. 10 *for* Cypripedium *read* Cypripedium.
28 .. 25 and 41 *for* vernation *read* nervation.
36 note, *for* Pflanzengeograpie *read* Pflanzengeographie.
37 line 20 *for* Equesitæ *read* Equiseta.
50 .. 22 *for* Eleagnaceæ *read* Elæagnaceæ.
— .. 5 from bottom *dele the first* "leaves," *i. e. for* stemless leaves *read* stemless.
65 .. 4 *for* following *read* preceding.
69 .. 28, and p. 72 line 30, *for* Tilliaceæ *read* Tiliaceæ.
72 .. 6 from bottom, *for* monodelphous *read* monadelphous.
75 .. 1 *for* Circeæ *read* Circææ.
86 note, *for* Schlecktendal *read* Schlechtendal.
105 line 9 *for* apennine *read* apennina.
111 .. 38 *for* lacineated *read* laciniated.
115 .. Betula, Alnus, Populus, and P. *alba,* should have the accent on the *first* syllable, and P. *canescens* on the *second.*
121 .. 11 *for* four *read* five.
127 .. 26 *for* flower *read* flowered.
133 .. 8 *for* Chriselhurst *read* Chiselhurst.
142 .. 28 *for* grica *read* Erica.
152 .. Cichorium *intybus* "Flowers twin. Leaves runcinate," instead of "Twin leaves, &c."
170 .. 6 from bottom *for* being *read* bearing.
182 .. 23 *for* rheas *read* rhœas.
184 .. 6 *for* appennina *read* apennina.
229 .. 13 *for* lychnites *read* lychnitis.
237 .. 20 *for* angustifolia *read* angustifolium.

The Author begs leave to apologise for this list, and promises, that if the London Flora reach a second edition, he will strive to render it more correct than the present.

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THE LONDON FLORA.

ON THE CLASSIFICATION OF PLANTS.

Botanists distinguish two methods of arranging vegetables: the *natural*, which comprehends in distinct groups all such species and genera as are connected by numerous relations, and that cannot be disunited without violating the order of nature. The *artificial method* conjoins genera not connected by numerous relations, but agreeing in some mark or marks employed as the characteristic of the class or group in which they are placed.

To form a proper estimate of the value of systematic arrangement, it will be expedient to trace it from its simplest rudiments, in botanical writings, to its present state.

If our investigation of the vegetable kingdom was limited, as it was anciently, to certain medical, dietetic, and poisonous plants, or to such as our own country affords, classification would not be absolutely necessary. But in extending our views over the whole of vegetable nature, memory would be inadequate to retain the multiplicity of subjects, if it were not assisted by observation and method.

At first, the study of plants was confined to nomenclature, and so it long continued; many ages elapsed before it began to be considered in a philosophical view. The following are some of the earlier methods of arrangement; viz., by localities, as aquatics, marine plants, &c.; by their time of flowering—as vernal, astival, and brumal; and very frequently by the letters of the alphabet. Theophrastus, a disciple of Aristotle, describes about five hundred plants, all that were known in his time, into culinary vegetables (*plantes potageres*), esculent grains (*Cereales*), and succulent plants yielding useful extracts. Dioscorides, who lived about 400 years after Theophrastus, classifies the plants known in his time (700) into aromatic, alimentary, and medicinal. Of the followers of these two celebrated ancient botanists, some arranged plants into bulbous-rooted, tuberous-rooted, and fibrous-rooted; also into hardy plants, greenhouse plants, and stove plants.

The division into trees, shrubs, shrubby plants, and herbaceous species, was retained for some time after botany began to be systematically studied. These imperfect methods, with several others that might be enumerated, prove that curiosity was not the only motive which directed the studies of these eminent men towards the vegetable kingdom. Among plants they found many suitable for food, some curative, others noxious and to be avoided; some troublesome weeds, others pleasing to the sight and smell; some that supplied them with clothing, and others that in various ways extended the range of their gratifications, in supplying essential oils, cosmetic waters, ointments, perfumes, conserves, &c.

Modern botanists, viz. all who have treated on this subject, from the revival of learning, about the end of the fifteenth century, till the present time, have adopted either the Empirical (as it is termed), the Artificial, or the Natural method. By the first (Empirical) is understood an alphabetical disposition of the objects which they described; and consequently the method was nearly useless to all but such as already knew them by name. Turner's and Gerarde's Herbales, and several other English works on plants, are arranged alphabetically. When the number of known species increased, this mode was abandoned, and various artificial and natural combinations were proposed in its stead.

Rivinus and Tournefort are among the most famous fathers of Artificial systems; Gesner, Cæsalpine, Morrison, and Ray, of Natural arrangements.

Rivinus proposed the most regular Artificial plan that has yet been published. He founded his division on the regularity and irregularity of the corolla, and on the number of the petals, viz.—

Such plants as bear regular or symmetrical flowers, constitute seven classes; viz.—

1. Plants having a monopetalous corolla (i. e. corolla of one piece, entire or cleft or parted); as Campanula, Primrose, &c.

2. Plants having two petals; as Circæa.

3, 4, 5, 6. Plants having an equal number of petals.

The 7th class comprehends the polypetalous species (i. e. having many petals).

The compound flowers (Compositæ) composed three classes, nearly corresponding to the sub-orders of this family, as recognised in modern times.

The 8th class comprehends the Compositæ with ligulate (strap-shaped) florets; as Hawkweed, &c.

9. Such as have discoid, and discoid and radiate florescence; as Tansy, Daisy, &c.

10. Such as have tubular florets; as Knapweed, Thistle, &c.

The irregular, simple-flowered plants also form seven classes, similar in their characteristics to the seven classes of plants with regular corollas; viz.—

11. Such as have irregular, monopetalous corollas; as the Fox-glove, Snapdragon, &c.

12. Those plants which have a dipetalous (two-petaled), irregular corolla.

The 13th, 14th, 15th, 16th, and 17th, comprehend such as have tripetalous (3-petaled), tetrapetalous (4-petaled), pentapetalous (5-petaled), hexapetalous (6-petaled), and polypetalous (many-petaled), corollas.

The 18th class includes all plants that have no corolla.

This system, alluring by its extreme simplicity and easy application, is all but useless in practice. Most of the plants must be arranged in a few of these classes, viz.; the monopetalous, tetrapetalous, pentapetalous, and hexapetalous classes of regular and irregular-flowered species; the other classes being seldom employed, there being so few plants with their peculiar characteristics. It is probable that several of these classes do not embrace a single individual. It is, besides, very difficult to decide in many cases whether the corolla be regular or irregular, as in the Labiate plants; some of the genera, like Salvia, being very irregular,

I. Trees and shrubs.
II. Herbaceous plants.

The first group forms the first and second classes, viz.:—

1. Such as have the embryo or rudiment of the future plant at the top of the seed, as oak, &c.

2. Such as have the same part at the base or hilum, (where the seed is attached to the pericarp or capsule,) as the apple.

Herbaceous plants compose the remaining thirteen classes, viz.:—

3. Herbs with solitary seeds; as Hop, Grass, &c.
4. —— with solitary berries; as Briony, &c.
5. —— with solitary capsules; as Pinks, &c.
6. —— with two seeds; as Galium, &c.
7. —— with two capsules; as Veronica, &c.
8. —— with a 3-celled capsule and a fibrous root; as Violet, &c.
9. —— with a 3-celled capsule and bulbous root; as Lily, &c.
10. —— with four seeds; as Sage, Borage, &c.
11. —— with many seeds, Radiate; as Chamomile, &c.
12. —— with many seeds, Cichoraceæ; as Thistle, &c.
13. —— with a common many-seeded flower; as Anemone, Crowfoot, &c.
14. —— with a folliculous capsule; as Vinca, &c.
15. —— flowerless plants, including the division Cryptogamia of Linnæus, or the Acotyledons and Cellulars of modern authors.

The 10th class of this system comprehends two natural orders, viz., Boraginaceæ and Labiatæ. The 11th and 12th comprehend three natural suborders,—and the 13th contains the orders Ranunculaceæ and Rosaceæ.

The great merit of this system consists in directing the student's attention to the essential parts, viz., the organs of fructification. Cæsalpine detected the situation of the radicle and plumule of the embryo plant; as also the number of cotyledonary lobes. His system, moreover, led to a more intimate acquaintance with the pericarp, its septa (partitions), and with the number and disposition of the ovules.

Robert Morrison, a native of Aberdeen, in 1680, published at Oxford a General History of Plants; and conformably to the old divisions arranged them under the following classes:—

1. Trees.
2. Shrubs.
3. Shrubby plants, i. e., partly shrubby, partly herbaceous; as Lavender, Rosemary, &c. The herbaceous species composed the rest of his classes, viz.:—
4. Scandentes. Climbing; as the Convolvulus, &c.
5. Leguminosæ. Leguminous; as the Lupine, &c.
6. Siliquosæ. Bearing a pod; as the Wall-flower.
7. Tricapsulares. Bearing a 3-celled fruit, and a 6-petaled flower; as liliaceous plants.
8.
9. } Compositæ. { Corymbiferæ; as Golden rod, &c.
10. } { Lactescent or pappose; s Lettuce, &c.
11. Culmiferæ. Culm-bearing; as Grass, &c.
12. Umbelliferæ. Umbellate plants; as Hemlock, &c.
13. Tricoccous. Bearing a triple berry; as Spurge, &c.
14. Galeatæ. Labiate plants; as Lamium, &c.
15. Multicapsulares. Bearing many capsules (Ranunculaceæ); as Marsh Marigold, &c.
16. Bacciferæ. Berry-bearing; as Briony.

17 and 18. Capillares and Heteroclitæ, including all the cellular orders.

A greater number of natural families are distinguished by this than by Cæsalpine's system. It has, besides, the merit of constituting the graminaceous tribes a distinct class, and of separating the Siliquosæ (Cruciferaceæ) from the Leguminaceæ.

The famous John Ray, a native of Essex, and a scholar of Cambridge, justly accounted the father of English botany, published in 1686, a method of arranging plants, far superior to those of his predecessors, and embracing a far greater number of species than had ever before been described. His General History of Plants comprehends the immense number of 12,000, many collected by himself in Britain, and in various parts of Europe. Others were procured from the East and West Indies; especially from the celebrated herbarium of Sir Hans

Sloane, and from the long accumulated stores of the Malabar botanic garden.

Ray divided these plants into 33 classes. Four of which, viz.:—

Fuci, Fungi, Musci, and Filices, are still retained.

5. Apetalous genera; as Goose-foot, Mercury, &c.

The next four contained all the compound flowers, with the modern order Dispaceæ, viz.,—

6. Planipetalous; as Dandelion.
7. Discoid; as Aster, &c.
8. Corymbiferæ; as Milfoil, &c.
9. Capitatæ; as Burdock, Scabious, &c.
10. Monospermæ—bearing one seed; as Valerian, &c.
11. Umbelliferæ.
12. Stellatæ; as Galium, &c.
13. Asperifoliæ (Boraginaceæ); as Borage, &c.
14. Verticillatæ (Labiatæ), Mint, &c.
15. Polyspermæ—many-seeded, Ranunculus, Alisma, &c.
16. Pomiferæ; as Gourd, &c.
17. Bacciferæ; as Deadly Nightshade, &c.
18. Multisiliquæ—many-podded; as Columbine, &c.
19. Monopetalæ; as Primula, &c.
20. Di-tripetalæ; Circeæ, Stratiotes, &c.
21. Siliquosæ (Cruciferaceæ).
22. Leguminosæ.
23. Pentapetalæ; as Lychnis, &c.
24. Floriferæ—grassy leaves, and one or more petals; as Hyacinth, &c.
25. Stamineæ—Grasses, Sedges, &c.
26. Anomalæ—Water Lily, &c.

Trees and shrubs compose the remaining classes of this system.

27. Arundinaceæ—Palms.
28. Apetalæ; as Pine, &c.
29. Fructu umbilicato—fruit crowned with the calyx; as Apple, Pear, &c.
30. Fructu non umbilicato—fruit not crowned with the calyx; as Plum, &c.
31. Fructu sicco,—a dry fruit; as Lilac, &c.
32. Fructu siliquoso; as Laburnum, &c.
33. Anomalæ; as Mulberry, Fig, &c.

A proper elucidation of this elaborate and beautiful system would occupy too large a portion of such an outline as the present; especially as it is now studied for curiosity rather than for practice.

It is worthy of observation, that the greater number of these classes into which the herbaceous plants are divided, are true natural assemblages, either orders or sub-orders, or containing parts of orders, or several orders. The greatest improvement was the division into monocotyledonous and dicotyledonous plants, which undoubtedly belongs to Ray.

The first botanist who arranged plants according to the natural system now usually adopted, was Antoine Laurent Jussieu, a nephew of Bernard Jussieu, curator of the Jardin des Plantes in Paris, the latter a disciple of the famous Tournefort. In the Genera Plantarum of the younger Jussieu, all the genera known at that time (2000) were disposed into 100 orders. The classification of these orders was:—

I. Acotyledons. Cryptogamia of Linnæus. Seeds (sporules) without cotyledons (seed lobes) germinating in any part of their substance. Flowerless or with latent fructifying organs. Structure of the plants, cellular or without spiral vessels; as Ferns, Mosses, Lichens, Fungi, &c.

II. Monocotyledons. Seeds germinating with one cotyledon, or if more than one, with alternate cotyledons. Structure, wood, pith, and bark not in distinct portions, but blended through the substance of the vegetable.

III. Dicotyledons. Plants germinating with usually two cotyledons always opposite; as the Bean, &c.

These three divisions he subdivided into 15 classes.

1. Acotyledons.

The Monocotyledons compose 3 classes, viz.,—

2. Monohypogyny. Stamens inserted on the torus (receptacle of the fruit); as Grass, Arum, &c.
3. Monoperigyny. Stamens inserted on the perianth (flower cup); as the Rush, Asphodel, &c.
4. Monoepigyny. Stamens inserted on the ovary (seed vessel); as Orchis, Iris, &c.

The dicotyledonous families are subdivided into 3 sections; viz., apetalous orders, monopetalous, and polypetalous.

The dicotyledonous apetalous plants (such as have a single perianth) form 3 classes; viz.,—

5. Epistaminy. Stamens inserted on the ovary; as Birth-wort (Aristolochia), &c.
6. Peristaminy. Stamens inserted round the ovary; as Polygonum, &c.
7. Hypostaminy. Stamens under the ovary, or on the torus; as Amaranth, &c.

The monopetalous orders compose the next 4 classes; viz.—

8. Hypocorolly. Stamens on the torus or on the hypogynous (under the ovary) corolla; as Jasmin, &c.
9. Pericorolly. Stamens and corolla attached to the ovary, but not inserted on it; as Erica, &c.
10. } Epicorolly. { Synantheraceæ (anthers united); as Marigold, &c.
11. } Epicorolly. { Chorisantheraceæ (anthers apart); as Honeysuckle, &c.

The polypetalous orders constitute the three remaining classes; viz ,--

12. Hypopetaly. Petals on the torus; as oxalis, &c.
13. Epipetaly. Petals on the ovary; as Epilobium.
14. Peripetaly. Petals inserted round the ovary; as Rose, &c.
15. Decliny. Anomalous; as Euphorbia.

Augustus Pyramus Decandolle, a well-known botanist of Geneva, made certain modifications of this system; viz. instead of commencing with the lowest orders of vegetable beings, he placed the highest in his first division and first class. Dicotyledons (exogenes), constitute three divisions; as in the Jussieuian arrangement; viz.,—

1. Dichlamydeæ. A double perianth (calyx and corolla).
2. Monochlamydeæ. A single perianth (calyx?)
3. Achlamydeæ. Without a perianth.

The first division (Dichlamydeæ) forms three classes; viz.,—

1. Thalamifloræ. Stamens on the torus; as Clematis, &c.
2. Calycifloræ. Stamens inserted on the calyx; as in Cinquefoil, &c.

3. Corolliflora. Stamens inserted on the corolla; as *Myosotis*, &c.

Monochlamydeæ and *Achlamydeæ* form the fourth and fifth classes.

Monocotyledons (endogenes) constitute three classes; viz.,—

6. Epigynous.
7. Perigynous.
8. Hypogynous.
9. Comprehends the cellular plants. The classes from 1st to 8th, including the vasculares.

The author of these remarks on classification, several years ago, proposed a plan of arranging the natural orders after the following scheme, viz.

I. Division—Acotyledons or Cellulars, as adopted by all botanists.

II. Division—Monocotyledons, subdivided into—

1. Aperianthine without a perianth, as Typha, &c.
2. Monoperianthine; a single perianth, as Hyacinth, &c.
3. Diperianthine; a double perianth, as Orchis, &c.

III. Division—Dicotyledons constituted three sub-divisions, viz.

1. Aperianthine, without a perianth.
2 Monoperianthine.
3. Diperianthine.

As the third subdivision of dicotyledonous plants was larger than the first and second united, a farther separation was necessary; and, accordingly, they formed four sections:

(1) Such as have a monosepalous calyx and a monopetalous corolla.
(2) Calyx monosepalous; corolla polypetalous.
(3) Calyx polysepalous; corolla monopetalous.
(4) Calyx polysepalous; corolla polypetalous.

These sections were further separated into groups, by the number and disposition of the stamens.

This mode of arrangement was relinquished in consequence of its separating certain genera from their orders. The calyx was found to be subject to considerable variations. It was also difficult to determine whether it was polysepalous or deeply parted. For these reasons the scheme was modified as follows, viz. :—

I. Division—Acotyledons.

II. Division—Monocotyledons.

1. Subdiv. Aperianthine, as Pond-weed, &c.
2. *Perianthine, with superior ovary, as Tulip, &c.*
3. *Perianthine, with inferior ovary, as Crocus, &c.*

II. Division—Dicotyledons.

1. Subdiv. Aperianthine, as Hippuris, &c.
2. Monoperianthine, as Daphne, &c.
3. Diperianthine.

This subdivision, viz. Diperianthine, is separated into two groups, viz.

1. Diperianthine, with a monopetalous corolla, as Digitalis.
2. ———— with a polypetalous corolla, as Potentilla, &c.

Each of these groups contains two sections characterized by having the ovary superior or inferior, thus

(1) A double perianth, monopetalous corolla and superior ovary, &c. as Salvia.
(2) ———————— ovary inferior, as Campanula.
(3) ———————— polypetalous corolla, ovary superior, as Dianthus.
(4) ———————— ovary inferior, as Epilobium.

These sections are farther separable into subsections by the number and position of the stamens.

Whenever there is a coherence of the petals of certain genera or species of polypetalous orders, such genera and species are considered as gamopetalous, rather than monopetalous, and are arranged with polypetalous genera.

Genera and species having the ovary one-half inferior, are placed among such as have an inferior ovary. No plant being deemed to possess a superior ovary, unless the ovary be quite distinct from the calyx.

The nomenclature of the natural orders might be rendered more uniform by adopting the following method, viz.

1st, By changing the terminal *e*, *us*, *um*, of the generic or specific name of the plant, which is the type of the order, into *aceæ*, as order Orobanchaceæ, from the typical genus Orobanche; Cistaceæ, from Cistus; Araceæ, from Arum, &c.

2nd, By adding the termination *aceæ* or *ceæ* to the cognomen of the type when its final letter is *a*, *n*, *r*, or *s*, as

Ericaceæ from Erica; Graminaceæ from Gramen; Aceraceæ from Acer; Orchisaceæ from Orchis.

3rd, When the generic name of the plant which typifies the order ends in *go* or *ga*, the terminal *o* or *a* is changed *into in, and aceæ added, as Boraginaceæ, from Borago; Saxifraginaceæ from Saxifraga. Besides securing uniformity of termination, ease and accuracy of pronunciation is* also obtained, as the accent will invariably be on the antepenultimate syllable. The words will be usually more euphonious, and the type will sometimes be more easily determined. For example, Polygălaceæ is a more sonorous word than polygăleæ; the antepenultimate syllable of the atter, though short, being almost of necessity lengthened in pronunciation. Gesneraceæ and Violaceæ are, for the same reason, preferable to Gesnerieæ and Violarieæ.

It may be observed, that if a vowel precedes the final *a* in any generic name used as the name of the order, it may be omitted; as Scrophularaceæ, instead of Scrophulariaceæ. The types of the orders Irisaceæ, Orchisaceæ, will be more easily recognized in those terms than in Orchideæ and Irideæ. Again the orders will be more easily known and remembered for having a termination peculiar to themselves, and differing from that of the sub-orders. Lastly, when it is desirable to use the names of orders adjectively, Berbérisaceous is preferable to Berberideous.

The sub-orders may also be reduced to a degree of consistency in appearance and sound distinct from the terminations of the orders, and thereby avoiding the ambiguity which is necessarily occasioned by using sometimes one, sometimes another form.

This is proposed to be effected by adding *ineæ* to the name of the genus typical of the sub-order, with the same restrictions as were used in the formation of the names of families.

Thus the grasses are divided into the following tribes or sub-orders, as

Panicineæ, from panicum;
Bromineæ, from bromus;
Agrostineæ, from agrostis, &c.

The same advantages will be obtained from this slight alteration in the appellations of the sub-orders, as in the families of which they form a part, viz. uniformity of formation, facility of pronunciation, and a certain mark of distinction between the names of orders and sub-orders.

The few subjoined names will exhibit the proposed object:

Names received.	*Names proposed.*
Ord. Violarieæ.	Violaceæ.
—— Ranunculaceæ.	. . . .
Subord. Clematideæ.	Clematineæ.
——— Ranunculeæ.	Ranunculineæ.
——— Pæoniæ.	Pæonineæ.
Ord. Balsamineæ.	Balsamaceæ.
—— Tropæoleæ.	Tropæolaceæ.
—— Celastrineæ.	Celastraceæ.
Subord. Staphylleaceæ.	Staphyllineæ.
——— Euonymeæ.	Euonymineæ.
——— Aquifoliaceæ.	Aquifolineæ.
Ord. Rosaceæ.	. . . .
Subord. Amygdalineæ.	. . . .
——— Spiræaceæ.	Spirineæ.
Dryadeæ.	Dryasineæ.
— Sanguisorbiæ.	Sanguisorbineæ, &c.

Dr. Lindley has proposed a similar nomenclature for the orders, with some difference, and for this he deserves the gratitude of students of the Natural System. When the paper was drawn up, from which these remarks are extracted, the names of orders and sub-orders were as herein stated. Since that time, (1831) they have been considerably modified. The paper on Nomenclature was communicated to the editor of the Magazine of Natural History, early in 1832.

ON THE

GEOGRAPHICAL DISTRIBUTION

OF

CLASSES, ORDERS, GENERA

AND

SPECIES.

PLANTS, under some form or other, are found everywhere on the surface of the earth; in fresh and salt water, on trees, walls, rocks, and snow. Protococcus (Red Snow) of Agardh lourishes on the Alps, in Sweden, and in the Arctic regions, tinging the snow with its bright red: hence its name.

The two great classes into which the vegetable kingdom s divided, viz. flowerless or Cryptogamic, and flowering or Phænogamous, prevail more or less in all latitudes, from the tropics to the polar regions. Their relative proportions differ considerably as the latitude increases. The ratio of these two grand divisions, viz., of Phanerogamic to Cryptogamic plants, is probably as 12 to 1, i. e., twelve flowering plants to one of the flowerless kinds. As the latter division increases, the farther they are from the Equator, and the nearer they approach the Poles, it is not probable that in the intratropical regions (except in equinoctial America) they amount to one-twelfth of the Flora. It ought, however, to be kept in mind, that this department of the science has not been so minutely investigated in the tropics and low latitudes, as in the northern parts of our hemisphere, particularly in France, England, and Sweden. The number of plants in France, according to the recent work of Duby on this subject, is about 6000; of which 4000 are Phænogamous, and 2000 Cryptogamous species: raising the proportion of the latter to the former as 1 to 2; being six times greater than their average proportion, and considerably more than that, if compared with the intratropical Floras.

From the recent investigations and discoveries of Dr. Greville, Sir W. J. Hooker, the Rev. Mr. Berkeley, and others, Great Britain produces nearly two flowerless, for one flowering plant. In round numbers, the Phænogamous plants are 1500, and the Cryptogamous 2800.

From the labours of Agardh, Fries, and others, it appears that in Sweden the proportion of the latter to the former is higher, being almost as 3 to 1; the former decreasing, while the latter increase. Whether these continue increasing with the increase of distance from the Equator, is uncertain; as the Floras of Lapland, Iceland, Greenland, Melville Island, East Greenland, and Spitzbergen, are probably incomplete in the Cryptogamic portion.

The Flora of Melville Island, exclusive of the Algæ and Fuci, which were not noticed by the officers in Captain Parry's Arctic expedition, and to whom we are indebted for all our information on this point, comprehends 130 species, viz., 70 flowering and 60 flowerless plants. Greenland bears 420, of which 174 are of the former and 246 of the latter, Spitzbergen 123; 56 flowering, and 67 flowerless.

This is sufficient to shew the extraordinary increase of the more imperfect or less perfect forms of vegetation, in proportion to the increase of humidity and cold, and also to the decrease of heat and light.

Of the two grand divisions of flowering plants, viz., Dicotyledons and Monocotyledons, the species of the former increase as their distance from the Equator diminishes:— *e. g.* The Greenland Flora comprehends 200 species of Phænogamous plants, of which 160 are Dicotyledons and 40 Monocotyledons; the latter being to the former as 1 to 4. In the Floras of Lapland and Sweden, they bear a similar proportion to each other. In the Floras of France, Portugal, and Egypt, the Monocotyledons decrease considerably. In Dr. Wallich's list of equinoctial Indian plants, the Dicotyledons are 6067, the Monocotyledons 918; being as 7 to 1. In the American equinoctial Flora, they are as 5 to 1, in consequence of the Andes affording a greater variety of temperature than any other portion of the earth's surface.

In New Holland the Dicotyledons are 2900, and the Monocotyledons 860; being a rather greater proportion than is found in places equidistant from the Equator in this hemisphere. Perhaps the great extent of water and the lower temperature of the southern hemisphere may produce this discrepancy. From these facts it is inferred, that although these three divisions of plants are universally dispersed, they do not in all parts maintain the same relative proportions. As we recede from the Equator, the flowerless plants rapidly increase, and Monocotyledons slightly decrease as we approach that line.

The orders are not nearly so general as the classes or grand divisions.

Some are almost exclusively confined to the equatorial regions, some belong chiefly to the temperate climates, and a few have their maximum on the verge of the frigid zones.

The following are some of the principal orders which are generally dispersed over the whole earth; i. e., having in all parts the same, or nearly the same, proportion to the rest of the vegetation; i. e., diminishing and increasing, as the other tribes diminish or increase:—

Ranunculaceæ, Papaveraceæ, Caryophyllaceæ, Leguminosæ, Rosaceæ, Compositæ, Campanulaceæ, Ericaceæ, Scrophularaceæ, Boraginaceæ, Polygonaceæ, Amentaceæ, Juncaceæ, Graminaceæ, and Cyperaceæ. These are among the most extensive of all the natural families.

The following are chiefly natives of temperate or frigid climates, viz.:—

Cruciferaceæ, Saxifraginaceæ, Primulaceæ, Onagraceæ.

Geraniaceæ, Umbelliferæ, Labiatæ, Coniferæ, Irisaceæ, Melanthaceæ, Smilaceæ, &c. are mostly natives of temperate regions.

Asphodeliaceæ, Amaryllaceæ, Orchisaceæ, Urticaceæ, Euphorbiaceæ, Chenopodiaceæ, Solanaceæ, Convolvulaceæ, Rubiaceæ, Malvaceæ, &c. are natives both of the temperate and torrid zones.

The following orders have no types in this country:—

Myrtaceæ, chiefly tropical; Combretaceæ, ditto; Passifloræ, West Indies; Ficoideæ, Mesembryanthemæ, Cape of Good Hope; Cactaceæ, West Indies; Proteaceæ, Cape and New Holland; Piperaceæ, East Indies; Scitamineæ, ditto; Palmæ, tropical regions.

Genera have a much more limited range than orders. Some of the most remarkable for utility or number or beauty, are pretty generally diffused; viz., Carex, Scirpus, Agrostis, Poa, Arum, Iris, Narcissus, Allium, Juncus, Chenopodium, Rumex, Polygonum, Pinus, Salix, Quercus, Scabiosa, Plantago, Euphorbia, Primula, Verbascum, Echium, Convolvulus, Salvia, Teucrium, Linaria, Solanum, Campanula, Gentiana, Hieracium, Carduus, Senecio, Eupatorium, Centaurea, Galium, Eryngium, Hydrocotyle, Rhamnus, Viola, Saxifraga, Silene, Arenaria, Sedum, Rosa, Potentilla, Helianthemum, Clematis ? Ranunculus, Arabis, Draba, Geranium, Malva, Polygala, Vicia, Trifolium, Medicago, Hypericum, Cyperus, Panicum, Salvia, Statice, Dianthus, Hedysarum, Astragalus.

The following genera are chiefly confined to the Cape of Good Hope :—Stapelia, Crassula, Aloe, Lachenalia, Erica, Oxalis, Mesembryanthemum, Pelargonum, Gnaphalium.

These are chiefly confined to certain regions :—Calceolaria, West coast of South America ; Piper, India ; Protea, Cape ; Ipomæa, Tropics ; Œnothera, North America ; Melastoma, Tropics ; Cassia, ditto ; Cactus, West Indies and South America ; Capparis, Tropics ; Bignonia, ditto ; Passiflora, West Indies ; Hibiscus, Tropics ; Sida, ditto ; Ficus and Acacia, ditto. Aster, Cineraria, Solidago, and other Corymbiferæ, are very general in North America.

It is probable that these genera comprehend a fourth part of all the Phænogamous plants in existence, and a portion of them are universal genera ; and all of them are widely dispersed, with the exceptions of the few confined to particular regions.

The dispersion of species is more limited than that of genera. The Flora of British America, by Sir Wm. J. Hooker, so far as published, comprehends 800 species growing in a climate similar to our own. Of these only one-eighth are natives of this country. In the portion of the Prodromus Floræ Indiæ Orientalis, by Drs. Wight and Arnott, among 83 orders, 260 genera, and 1400 species, only 15 of the latter are natives of England. Sixty-four of the genera are common in these islands, and forty of the orders. The species common to this country, and to the Madras Presidency, are, Cardamine hirsuta, Stellaria aquatica, Galium aparine. The others, viz. Papaver somniferum, Fumaria parviflora, and officinalis ; Capsella bursa pastoris, Stellaria media, Malva rotundifolia, Oxalis corniculata, Ervum hirsutum, Torilis anthrisca. Fragaria elatior may be suspected, as rather of European than Indian original ; being all found about the dwellings of man in these parts, they may have been conveyed in goods or stuff to foreign places, where, finding a suitable soil and climate, they have in time established themselves as naturalized inhabitants. A considerable number of British species is described in Thunberg's Flora Capensis; but their claim, in several cases, as African plants, for the above reason, is doubtful. The Japanese Flora, of the same author, contains several not so liable to these objections.

Of 700 species described in this work, (Flora Japonica), there are about 40 British; viz., Ligustrum, Lemna, Cypriipedium, Phalaris arundinacea, Alopecurus geniculatus, Arundo Phragmitis, Lolium temulentum. Some, Galia, Urticæ, Ilex, &c.

In the Flora Australia of Foster, which comprehends 594 species, 7 are British; viz., Phalaris Canariensis, Panicum sanguinale, Tillæa muscosa, Solanum nigrum, Salsola kali, Typha latifolia, Sonchus oleraceus.

The number of British species found among the Arctic plants collected by the officers in Captain Parry's expeditions, considerably exceeds those found in the southern hemisphere.

The Phænogamus species' of Melville Island amount to 70: about 15 of these are British. The flora of Equinoctial America, by Humboldt and Bonpland, includes 134 orders; of these 15 are British: of the 984 genera, 270 are British; of the 6000 species, there is not one British, and scarcely a European species.

The great bulk of all vegetable beings is to be found within the tropics, and in the temperate zones, reaching as far north and south of the equator as 45 degrees. Supposing all the known vascular plants to amount to 60,000, 4-5ths will be found in this section of the globe, viz., 45 degrees on each side of the equator, 1-5th will be about the proportion between these limits and the 68th degree of north and south latitude. The remaining sections from the latter limits to the poles, will perhaps yield 1-20th of the whole.

The enormous proportion in the tropical and warmer temperate regions, is chiefly owing to the great diversity of climate, the medium annual heat being in those parts between 80 degrees of Fahrenheit and perpetual frost and snow, consequently, producing plants peculiar to the frigid as well as to the torrid climes.

Besides, we find that the higher the organization of the order or genus is, the more extensively is it diffused in the warmer climes. In the equatorial regions the Monocotyledonous plants are to the Dicotyledonous, as 1 : 8. In the *temperate, as 1 : 4. In the frigid, as 1 : 3—not by a positive increase, but by the great decrease of the other* class. Annuals increase as they recede from the tropics, being but 1-20 there, and 1-6 in the temperate zones. Their diminution in high northern latitudes is caused by the severity of the winters in those places, which destroy the seeds.

It appears that as the annual medium heat diminishes as we advance from the equator towards the pole, so do certain tribes, as the Malvaceous, the Leguminous, the compound and Rubiaceous. On the contrary, the grassy tribes, the heaths, the ament and cone-bearing trees increase in relative proportion to other plants, the farther they are distant from the equator, until they reach the polar regions, where trees and shrubs barely exist.

Some plants are named gregarious, because they are always found in large masses. The common Heath, with which our mountains are covered, is an example of this property. Also many of the Grasses, Rushes, Sedges, Mosses, Fungi, &c.

This is generally observed in European and North American forests. In Scotland the natural woods are chiefly Pine or Birch. In England oak, or beech on a chalky soil. In America, pine, oak, walnut, or maple, according to the nature of the soil, and the mildness or severity of the climate.

The intra-tropical regions of America, owing to the vast altitude of their mountains, and the extent of their plains, contain an epitome of all possible climates, so that plants of many kinds may take root, and grow so closely together, that it seldom can be said which is the predominating species.

In the equinoctial regions of the globe vegetation appears in the greatest luxuriance, and in the highest perfection. Plants of the cellular kind are under the average proportion which they bear to the rest of the vegetable tribes, while the highest orders, viz. Dicotyledons, preponderate. The usual proportion of Monocotyledons is also wanting. And the more permanent forms of the other tribes, viz., trees and shrubs, gigantic tree-ferns, and arborescent species of grass, far exceed the number of herbaceous and annual plants.

In these climates the cereal grasses, i. e. grain bearing plants, are chiefly Mays (Indian corn), Rice, Millet, and such like. The common fruit trees of temperate latitudes, *such as the apple, plum, currant,* walnut, &c., and even the vine, *give place to the tamarind, clove, cinnamon, nutmeg, cocoa, and bread-fruit trees. The cultivation of the former* would be as hopeless in tropical countries, as that of the latter would be fruitless in these regions.

The ardour of a vertical sun would quickly scorch up and destroy our deciduous trees, while it fosters and invigorates those that are partially protected by a dense mass of evergreen foliage.

Another feature of tropical vegetation is, that the herbaceous orders of temperate countries, are usually frutescent, or even arborescent, between the tropics; and, also, that species which are not only herbaceous but annual, assume in those countries the nobler form and more extended duration of trees.

In the frigid zones, on the contrary, the number of trees is very small. The Scotch pine, the Birch, and a few Willows, are the only trees of Lapland. Farther north in the same country, the Pine and the Birch disappear, being unable to support the rigour of an Arctic winter. In Spitzbergen only one species occurs, Salix herbacea, which partakes rather of the character of a herbaceous plant than of a tree.

The temperate regions produce the most agreeable and nutritive fruits, bread-corn, pulse, and vegetables; the forests afford the most useful trees for timber, and the meadows are covered with abundance of succulent herbage.

The number of orders in the British Flora is nearly one-half of the whole number of natural families; and as orders are very extensively dispersed, the ordinal characteristics may be acquired from our indigenous orders, of all the plants in the northern parts of Europe, and of the larger part of the North American and North Asiatic regions, from the 30th degree of latitude to the verge of the pole. Two-thirds of the species growing between the 50th degree and the tropical circle, may be attributed to their proper families by the same means; and one-half of such as grow within the tropics. From these data it follows, that the ordinal characteristics, the properties, and mostly the forms and habits of all plants growing spontaneously in the north of

France, in Germany, Denmark, Sweden, Russia, Lapland, Greenland, Upper Canada, Labrador, on the northern coasts of America, in Siberia and Kamtschatka, may be readily ascertained by means of the indigenous species in the vicinity of London, whereby all the orders in the above mentioned countries are sufficiently illustrated. The same characters, &c., of two-thirds of the plants belonging to the United States, the south of Europe, the shores of the Mediterranean, Egypt, Asia Minor, and Asiatic Turkey, may be derived from the same source, viz., the London Flora. Also a knowledge of the vegetation of this district will be sufficient to enable any one to refer with certainty one-half the number of tropical genera and species to their proper place, in their natural families. North America, Europe, with the countries surrounding the Mediterranean and the northern parts of Asia, are believed to produce at least 20,000 species. Of these 5000 may be assigned to the countries between the 50th degree and the polar regions inclusive. Of all these the ordinal characters are illustrated by British plants, together with two-thirds of the remainder, viz.,10,000, making a total of 15,000.

If the tropical species be estimated at 20,000, one-half will be the proportion whose ordinal characters are illustrated by our native plants. The number of known phænogamous species (i. e.) of all plants except the Cellulars of Decandolle, or the Cryptogamia of Linnæus, amounts to about 60,000. And of these 30,000 may fairly be supposed to have ordinal types within seventy miles of the metropolis.

The range of genera, as we have shewn, is less extensive than that of orders.

The number of genera found about London is five-sixths of the number found in Great Britain. Nearly the same proportion of German genera, and about one-half of the French and Austrian, almost the whole of the Swedish, Lapland, and Islandic genera, will be found in the London district, i. e. within seventy miles of the metropolis.

From these facts, the great importance of studying the generic, and especially the ordinal characters of plants, is manifest.

* The author regrets that he is unable, for want of space, to enlarge on this most important and interesting branch of the subject. The tables which were drawn up, with other materials, would make a small volume. The remarks on the soil, altitude, exposure, temperature, geological features, and chief botanical stations of the country, to which this Flora has an especial reference, have for the present been necessarily postponed.

OUTLINES
OF
VEGETABLE ORGANIZATION
AND
PHYSIOLOGY.

ALL beings are divided into organized, or inorganized; the latter are homogeneous in their structure, every portion of which consists of the same sort of substance, and these integrant particles (molecules) are conglomerated so as to form the inorganized body, as minerals, earths, water, gas, &c.

Organized bodies have organs or instruments differing in constitution from other parts, and these are either composed of different elements, or of such as are so modified as to render the organ capable of performing the functions allotted to it; as the feet, hands, and trunk of animals; and the root, stem, leaves, flowers, and seeds of vegetables.

The most obvious difference between these two classes of bodies is this: animals are endued with sensibility as well as vitality; the former does not appear to be a property of plants. Animals are besides gifted usually with the power of locomotion, and always with the power of choosing or rejecting certain sorts of food: plants do not possess this power of choice.

The term "organ of vegetation" is not limited to the external parts, as the root, leaves, &c., but is applied to those minute cells and vessels which compose the internal structure of plants. Hence the organs may be divided into *internal* and *external*, or simple and complex.

The simple or internal, or elementary organs, are the cellular and vascular tissue, which appear to be but modifications of the same element, differing more in form than in chemical composition. The former is a membrane of great delicacy and tenuity, constituting the sides of minute cells, generally approaching to a hexagonal, honeycomb shape; the latter has obtained the name of fibre, or vascular, or vasiform tissue, and is employed in the formation of elongated, cylindric cells. Sometimes these vessels are spirally disposed, like a cork-screw, and then they have the name of tracheæ, or spiral vessels. All plants, and every part of each, are composed of one or more of these tissues.

The less highly developed families, as Fungi, Algæ, and Lichens, consist altogether of cellular tissue. Mosses and Ferns have in addition vascular tissue in the form of fibre, but none in the form of spiral vessels. The higher orders of plants possess all the three forms.

Hence has originated the tertiary division of plants, viz.

I. Cellular, or Eductulosæ, composed of this kind of tissue alone, as Fungi, &c.

II. Ductulosæ, having in addition vasiform or fibrous tissue; and

III. Vasculares, furnished besides with spiral vessels.

The complex organs are subdivided into—

1. Vital, that is vegetative, or conservative, or nutritive, without which, or some of which, the plant could not exist nor vegetate; these are the *root*, *stem*, and *leaves*; and

2. The reproductive, whereby it is enabled to prolong the existence of the race or species: these are the *flowers*, or *floral organs* and the *seed*.

The organs of vegetation, or nutrition, or preservation, are the *root*, *stem*, and *leaves*.

The function of roots is to connect the plant to the soil, or to that medium on which it exists, and to supply it with nourishment; and, for this latter purpose, the fibrils are exposed at their extremities, the ducts and cellular tissue not being covered with the usual epidermis.

By these, named spongiols, the absorption of aliment is accomplished.

The external form of roots is various, but they may be divided into the fibrous and the bulbous: the former being exemplified in the roots of Grasses, Trees, and many other plants. Bulbous roots are rather a modification of the stem, than real roots, and underneath their base they are provided with fibres. The roots, as they are commonly called, of several plants, as the Carrot, Turnip, Cyclamen, and others, partake more of the character of stems than of roots. Some stems are wholly underground, as in the Bog-bean, and Flag; these are called rhizoma, or stock-root.

The stem, in the more highly developed orders of plants, is composed of three parts, viz. the *Centrical Part*, named the *Pith;* the *Woody Layers;* and the *Bark*, or *Cortical Layers*.

These three parts are very obvious in a section of a young shoot of any dicotyledonous tree, as Elder, Willow, or Ash.

The stems of monocotyledonous plants differ from stems of the former in not having any distinction of *pith*, *wood*, and *bark*, these parts being, in this class, dispersed over or through the trunk. In this climate we have no common examples, the ligneous species being mostly confined to tropical countries. Trees of the former class increase vertically by the annual extension or protrusion of a terminal bud becoming a shoot, and horizontally by the production of successive layers of wood. Trees of the latter class increase vertically by the adhesion and induration of the bases of the leaf stalks, which, in plants of this kind, are terminal. They have very little horizontal increment. These two great divisions of phænogamous or flowering plants may be also distinguished by their leaves and flowers.

The leaves of most plants consist of thin flattened expansions composed of veins or nerves arranged in a sort of net-work, and having the interstices filled up with cellular tissue, called in leaves parenchyma, and covered with the epidermis. The petiol or leaf-stalk consists of a bundle of fibrous tissue, or nerves, which, by expansion, form the broad part, or disk of the leaf. If these diverge in different planes, the leaf becomes what is termed succulent.

The most general division of leaves is into *simple*, when the limb consists of one piece, and *compound*. The simple leaf is characterized by its form, as *orbicular*, *oval*, *lanceolate*, *linear*, &c.; or by its margin, as *incised*, or *cleft*, or *serrated* or *toothed*, &c.; or by its texture, as *rigid*, *smooth*, *shaggy*, &c. The compound leaf is composed of one or more leaflets connected with the petiol by a joint (articulation), and may be *simply compound*, as in the Mountain-ash; or *doubly* or *triply compound*, as in Cow-parsley, (Chærophyllum), Chervil, &c.

This modification of leaves (compound) is also usually named *pinnate*, *bipinnate*, *&c.*, a term derived from the winged appearance of the leaf. The fibrous vessels which compose the veins or nerves being closely condensed in the petiol, if present, separate on arriving at the limb, and are variously disposed, *either becoming angulinerved or curvinerved. The former is a usual characteristic of dicotyledonous plants; the latter* of the monocotyledonous species. In angulinerved leaves the vessels form one conspicuous longitudinal nerve, called the mid-rib, from which secondary veins originate, and these are either straight or curved, and generally more or less branchy like the ramification of trees. Many compound leaves are referable to this kind of nervation. Palminerved leaves, instead of forming a mid-rib, diverge into three or more equally strong nerves, which are also supplied with lateral branches. The leaf of the common garden flower Hepatica triloba, is an example of this form: also, Platanus orientalis.

Peltinerved leaves have the vessels diverging on a plane forming a greater or less angle with the petiol, and radiating from its point of insertion into the leaf. Leaves of this form are uncommon. Hydrocotyle or sheep-rot is an example.

Pedalinerved leaves have a divergence of the mid-rib into two lateral nerves, from which branches originate in the direction of the apex of the leaf. This is a very uncommon mode of vernation. Helleborus fœtidus is an example.

Curvinerved leaves are usually curved at their base, and generally maintain a parallel direction in respect of each other. They are easily distinguished from angulinerved leaves, by their simple or unbranching form, and by their slighter prominence.

Of this sort of nervation there are two divisions;—*convergent* when they extend parallel to the margin of the leaf, and converge or unite towards its apex; the Pond-weeds and Water-plantain are examples:—divergent, when they diverge from the mid-rib in a pinnate mode, without uniting at the apex.

It is to be observed that the shape of the leaf mainly depends on the manner of its vernation. The breadth of the leaf is generally regulated by the largeness of the angle which the branching nerve forms with the mid-rib.

Besides these vital organs, viz., *root*, *stem*, and *leaves*, there are certain organs called appendages to these, as *stipules*, *spines*, *tendrils*, &c.

Stipules are foliaceous in their nature, mostly found at the bases of compound leaves. They are not found on monocotyledons, nor on such dicotyledons as have sheathing petiols.

Spines, as in the Furze (Ulex), are undeveloped leaves; and in the Blackthorn and other trees of the plum genus, they are abortive branches. They disappear in the cultivated tree.

Tendrils are sometimes formed by the extension of the mid-rib of the leaf beyond the apex of the limb, as in many leguminous plants.

In the vine they are formed of abortive branches; and in the cucumber from an altered state of the stipules.

In cryptogamic plants the organs analogous to leaves, are named fronds, and the mid-rib, if any, as in Ferns, is called a *stipe* or *rach;* in Lichens, a *thallus.*

The reproductive organs of plants are usually subdivided into the flower and its modifications; and the fruit.

The floral organs, besides the bracts (bractea), which are only a modification of leaves, are the *perianth,* that part which surrounds the more essential organs, viz., the *stamens* and *styles.* When the perianth is double, the outer is called the *calyx,* and the inner the *corolla.* The calyx is either *monosepalous,* that is, of one piece, usually more or less cleft or parted, or of several distinct pieces, called *polysepalous,* that is, consisting of several pieces. The corolla is in like manner denominated *monopetalous* or *polypetalous.* The construction of the corolla is of considerable importance in ascertaining the genera and orders of plants. The *stamens* occupy the next place in the arrangement of these organs, and they are of far greater importance. These organs consist of the *filament* or *thread* attaching them to that part whereon they grow, and the *anther* or *pollen bag,* which contains the farina by which the ovules or rudimentary seeds are fertilized. The central parts are the *pistil* or *pistils,* divided into three parts, viz., the *ovary* containing the immature seeds, the *style* or *column,* and the *stigma.* All of these organs are not essential. Some plants have no perianth; neither calyx nor corolla, as the Hippuris vulgaris (Mare's-tail). Some have only a single perianth: others have only the pistil with or without the perianth on one part of the plant, and barren florets, i. e. stamens, on another part. Such plants are usually styled *monœcious. Others have these parts on different plants.* The Hazel and many forest-trees afford examples of the former. The Hop and Willow of the latter.

Hence stamens and styles are the only necessary and indispensable floral organs.

The fruit consists of two parts, viz., the *pericarp* or *seed vessel*, and the *seed*. The former (pericarp) has three parts; the *epicarp* (upper coat); *sarcocarp* (sometimes fleshy as in the apple); and the *endocarp*, which immediately surrounds the seed or lines the cell of this organ: there are numerous forms and modifications of the fruit, and all of them are very important.

The seed consists of the *embryo* or rudiment of the future plant, and is composed of the *radicle*, or *rootlet*, the *cotyledons* or seed lobes, and the *plumule*, that which by development becomes the stem. This part is often surrounded with albumen, a farinaceous substance, supplying nutriment to the vegetable before it can derive any from the soil; and over this is the *episperm* or seed-coat. In this covering there is always a scar called the *hilum*, where it was attached to the *placenta* or to the *trophosperm*, and a hole called the *foramen* through which the radicle in germination protrudes.

From this part, viz., the seed, vegetables have been divided into *Embryonate*, that is, such as have an embryo properly so called; and *Exembryonate*, such as are destitute of this organ; as the tribes of cellular or cryptogamic plants. Also, the *Embryonate* are divided into the two classes of *Monocotyledons* and *Dicotyledons*, according as the embryo has one or two cotyledons.

ON

VEGETABLE PHYSIOLOGY.

The vital principle of plants, exhibited as it is by their origin from seed, their growth, maturity, decay, and decomposition, bears a great resemblance to the same phenomena in animals.

The analogy is further maintained in both classes of organized bodies by the necessity of certain stimulants, whereby the duration of both is maintained. Air, light, soil, moisture, heat, are more or less necessary for the nutriment and perfection of vegetable substances.

Tenacity of life is another analogy between vegetables and animals, as exemplified in the bulbs of plants, and especially in seeds which retain their vegetative powers after long periods of suspension, and after considerable alterations of temperature. Mosses are known to revive after being for many years in a herbarium, on the application of moisture.

Irritability is another quality of vegetables which they have in common with animals. This is remarkably exhibited in the Sensitive plant, and also in what is usually termed the sleep of plants, viz. the folding of the leaves of many plants, especially of the leguminous order, as Trefoil, &c.

The functions of vegetables may, like the organs, be divided into

I. The function of *nutrition;* and

II. The function of *re-production.*

The function of nutrition is subdivided into several processes, which are performed simultaneously in the different parts of the vegetable, and especially at those seasons when the vegetative powers are most active.

The first is the power of *absorption*, whereby moisture is supplied to the plant. This is chiefly accomplished by the spongiols, or extremities of the root. By these the most important elements of vegetation, viz. oxygen, hydrogen, and carbon are absorbed, and in a liquid state, for the spongiols are incapable of receiving them in any other.

All other products, whether earthy, mineral, or saline, which are found in small quantities in some plants, must have been introduced in a state of solution. This watery compound, thus introduced, is named the sap.

This product is, by another of the processes or functions, carried upward, through the stem and branches, to the leaves, by means of the vascular or fibrous tissue. Being arrived at the leaves, another process is accomplished, named *exhalation*, whereby the watery part is carried off by something similar to evaporation, but much more effective. The *stomata* of leaves are the organs for effecting this object. By this operation about two-thirds of the fluid absorbed through the spongiols is carried off. The rest, containing all the saline, carbonaceous, and whatever other materials it may contain, is retained, and is prepared to undergo a farther modification. The subsequent process is named *respiration*, that is, the inhaling of atmospheric air by the leaf and other fresh parts of the plant. The oxygen of the atmosphere unites with the carbon in the sap, forming carbonic acid; the azote, being separated from the oxygen, is exhaled. The carbonic acid thus formed, is converted, through the agency of light, into various organizable products, as *gum*, *fecula*, *sugar*, and *lignine*, which are named vegetable secretions.

Gum is a well known product of many plants, and is a chemical combination of carbon, oxygen, and hydrogen; this is considered the primary material of vegetable nutriment. *Fecula* is a substance found in great abundance in many plants, as Maize, Wheat, and other Cereal grasses; in leguminous plants, in the Potato, Arrow-root, Bread-fruit, &c. The third secretion is *sugar*. The fourth *lignine*, the substance of which the fibrous tissue is constituted. Various other products are obtained from vegetables, as milk, fixed and volatile oils, resin, camphor, &c. The latter are not so abundantly diffused through plants, as those named vegetable secretions, which form the proper nutriment of all plants. These various substances, by another process, called *assimilation*, ultimately become developed as parts of an organized body in the form of vegetable tissues.

The processes or functions of re-production are the following, viz. the *expansion* of the flower-bud, which is termed flowering.

The second process is the *fertilizing* of the ovules, or rudiments of the future seed.

This most important function is effected by the grains of pollen, contained in the anther (pollen bag) of the stamen, falling on the stigma, (upper part of the style,), where it is retained by the glutinous exudation of that part. After remaining some time on the stigma, each grain protrudes one or more processes which penetrate the cellular tissue of the stigma, and, extending into the cavity of the ovary, pass along the surface of the placenta and surround the ovules.

The next process is called *maturation*. The ovule, when it can be first observed in the flower-bud, appears like a small pustule formed on the inner surface of the ovary without any distinct traces of organization. This is invested with the *testa*, or outer coat of the seed, and sometimes with a secondary skin under it. Within this inner coat the embryonic sac is subsequently developed.

The embryo consists of three parts: the *radicle*, or *rootlet;* the *cotyledons*, or seed lobes (leaves); and the *plumule*. In their earliest state the *foramen* is always opposite to the *hilum*, (that part by which it is attached to the ovary,) this position of the ovule is termed *erect*. When the foramen, by some twisting of the nucleus, is brought close to the hilum, the position is called *pendulous;* and when it settles half way between the apex and the hilum, it is said to be *transverse*, i. e. when the ovule is at right angles to the hilum.

The *maturation* of seeds occupies different periods; some, as the Sagina, requiring only a few days; others, as the Pine tribe, almost a year.

The *dissemination* of seeds, which is the next process, is accomplished in various ways. Some by means of *wings* or *down*, whereby they are wafted by winds to great distances; others by *hooks*, attaching themselves to the shaggy coverings of animals, are by them transported to remote places. A few scatter their seeds to a considerable distance by the elasticity of their capsules.

ON THE

NATURAL CLASSIFICATION OF PLANTS,

OR THE

NATURAL SYSTEM.

ALL vegetables are separated into two distinct groups; viz., such as are *flowerless* and without proper *seeds*, their propagation being effected by *sporules* or *spordia* (sporule-like grains), generated in the substance of the plant, as Ferns, Mosses, Lichens, Algæ, and Fungi; and such as produce *flowers* and *seeds*, as the greater number of vegetables do. These two primary tribes are distinguished by their organization; the former being chiefly composed of *cellular tissue*, the latter having also a proportion of *fibrine* and *spiral* vessels. Hence the former, viz., flowerless plants, are often denominated *Cellulars;* and the latter, viz., flowering plants, *Vasculars.* All flowering plants, or Vasculars, are separated into *Monocotyledons*, that is, their seeds having but one lobe or seed-leaf; and *Dicotyledons*, which germinate with two lobes. These two divisions are also distinguished, by their growth, into *Endogens*, increasing by the addition of woody matter to the inside of their stem; and *Exogens*, increasing by layers on the outside of the same organ.

Essential Characters of the Classes and Orders.

CLASS I.

FLOWERLESS PLANTS, (ACOTYLEDONS, *Jussieu*—EXEMBRYONATE, *Richard*—CELLULARS, *Decandolle*—CRYPTOGAMIA, *Linnæus*), &c.

Substance cellular, except in a few of the higher orders, as Filices, where vasiform tissue is found. Stem increasing by extension of its point, cuticle usually destitute of stomata. Reproductive organs either sporules or spordia (not perfect seeds, i. e., not having an embryo of distinct organs, but a uniform mass capable of germinating from any point of the surface of the sporule), enclosed in cases called *thecæ*, or embedded in the substance of the plants.

This class is connected with flowering plants by Ferns. Lycopodium (Club-moss) and Equisetum (Horsetail), which have either certain relations, or external resemblances to some families of flowering plants; as Cycadaceæ, Coniferaceæ, and Gnetaceæ.

Order I.—FILICES (FERNS).

Plants leafy, coiled up in vernation, rising from a rhizoma (stock-root). Leaf (frond) either simple or variously divided, composed partly of vascular tissue, and the cuticle is frequently provided with stomata. Reproductive organs (thecæ) originate on the under surface of the frond, either from the veins or from the margin; either on a pedicel with an elastic ring, or sessile and without the ring; either arising from underneath the cuticle and forcing it up, and forming what is called indusium, or springing from the surface of the leaf.

This order (Filices) or alliance, as *Dr. Lindley* terms it (see Introduction to the Natural System), contains the following orders, adopted by him in the same work; viz.,

1. POLYPODIACEÆ. "Thecæ furnished with a vertical, usually incomplete annulus (ring), bursting irregularly and transversely."

In 2. GLEICHENIACEÆ, "the thecæ are nearly sessile, and burst longitudinally."

3. OSMUNDACEÆ. In Osmunda the fructification is produced on contracted or undeveloped leaves, and arranged in branching spikes.

4. OPHIOGLOSSACEÆ. "Thecæ coriaceous, without any ring, half two-valved."

The total number of Filices and their allies belonging to genera found in Britain, is upwards of 1000. The number of species known is about 1500.

Plants of this order compose about 1-40th of the whole number of Phanogamous species; on the verge of the tropics they have a much greater preponderance, and vary from 1-9th to 1-4th of the whole Flora. This is their maximum, and it has been observed only in islands, as in the Sandwich group, Jamaica, &c.*

In continental situations they increase in proportion to their distance from the tropics: for example, in Portugal they form 1-116th of the Phænogamous vegetation; in France, 1-63d; in Sweden, 1-35th; in Britain, 1-25th: in Scotland, 1-23d; in Ireland, 1-18th; in Greenland, 1-10th.

The first tribe of Ferns, viz., Polypodiaceæ, may be known from its kindred sub-orders, by having the fructification (in the British genera) on the back of the fronds, hence called dorsal Ferns. In Osmundaceæ and part of Ophioglossaceæ the fructification is pedicelled and in branching spikes. In Gleicheniaceæ an undeveloped leaflet, or contracted lobe, forms a sort of two-valved marginal receptacle, the nerve forming a central column to which the fructification is attached. The Adder's tongue (Ophioglossum) and Moonwort (Botrychium) are easily known by their single leaf (frond) being somewhat succulent, entire in the former, and pinnate, in the latter bearing the fruit on a longish pedicel, branched in Botrychium, simple in Ophioglossum.

Order II.—LYCOPODIACEÆ (Club Moss).

Moss like plants, with creeping stems and imbricated leaves, or stemless with erect leaves. Reproductive organs, axillary sessile thecæ, either valvular (with valves) or indehiscent (not opening). Sporules marked at the apex with three minute radiating elevated ridges.

This small tribe connects Ferns with Coniferæ and with Mosses.

They are most abundant in hot and moist places about the tropics. Some species abound in mountainous situations in the northern countries.

Order III.—MARSILIACEÆ (Pepperworts).

Organs of reproduction enclosed in coriaceous involucres, arising either from the root, or from the inner surface of the leaves, of several cells. Leaves coiled in vernation like Ferns, with nerves, veins, and stomata.

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* In St. Helena, as 1-2; in Norfolk Island, as 1-3, according to Endlicher's Prodromus. In Tristan da Cunha, as 2-3—Brown. Ex Meyen Pflanzengeograpie.

In habit and appearance dissimilar to the Ferns and Club Moss.

They grow in lakes or inundated places in temperate regions.

Order IV.—EQUISETACEÆ (HORSETAIL).

Leafless branching plants. Stem fistular jointed, with toothed sheaths; branches whorled, similar to the stem. The cuticle is furnished with stomata, and in their composition are a few spirals. The inflorescence is arranged in conical spikes, and the florets are on the inside of the peltate scales. They have an affinity with vascular plants through Zamia and Casuarina both in their reproductive organs and general appearance.

Dr. Lindley in Introduction to Natural System, arranges them in his class Gymnosperms, viz., with Coniferaceæ, Cycadaceæ, &c.

This order is found to contain much silicious earth, and is on this account very useful for polishing furniture. *Equisetum hiemale* (Dutch rush), is imported for this purpose. They (*Equesitæ*) are found in ponds, ditches, and moist places in all parts.

The most obvious diagnostic marks of these four orders, are their port (appearance) or habit.

The Ferns have a circinate vernation, a (usually) broad, flat frond, the rach (leaf stalk) rising from the root. The Club Mosses have a branching upright, or trailing, or repent (rooting) stem (frond), thickly covered (imbricated) with leaves. Equisetaceæ have an upright habit with whorled branches, and fructification in terminal aments (catkins or spikes). Marsiliaceæ including Isoetes (Isoetaceæ) approach the vascular orders, in the rushy or grassy appearance of their leaves. They can scarcely be mistaken for any individuals of the other orders of this class.

CLASS II.

MONOCOTYLEDONS, OR ENDOGENS.

The simple or elementary organs consist of cellular and vascular tissue, part of the latter being spirals. Stem (if any) composed of cellular tissue, interspersed with bundles of vascular tissue, without distinction of wood and pith, and without medullary rays. Leaves not so distinctly articulated as in dicotyledonous plants, with parallel simple (unbranched) veins. Flowers generally with a ternary division. Perianth mostly single. Embryo with one cotyledon: if there be two, one is imperfect. Radicle enclosed in the substance of the embryo, through which it penetrates in germination.

In equinoctial regions Monocotyledons constitute 1-6th of the flowering plants: in the temperate zone, 1-4th; and in the frigid zone 1-3rd.

DIVISION A.

Flowers destitute of a perianth; or having its place supplied by callous or scaly lobes; or by green, leaf-like attachments.

Order V.—PISTIACEÆ (DUCKWEED).

Florets appearing on the margin of the frond, monœcious (barren and fertile on different parts of the plant), ovary one-celled, with one or more erect ovules. The embryo has a lateral cleft for the emission of the plumule.

A small order of very cellular minute floating plants.

Lemna is found in the temperate parts of the world, and Pistia between the tropics.

Order VI.—NAYASACEÆ (FLUVIALES, *Jussieu.*)

Aquatics with very cellular, often pellucid leaves. Flowers inconspicuous arranged (in British species), usually on a cylindric spike, with two to four scaly or callous lobes for a perianth. Stamens definite (not numerous), hypogynous (inserted below the ovary). Ovaries one or more than one, with one pendulous ovule. Fruit dry, indehiscent.

Common without the tropics, a few are found near the equator.

Order VII.—JUNCAGINACEÆ (ARROW-GRASS).

Perianth herbaceous. Stamens six. Ovaries three or six, with one to two erect ovules. Fruit dry, one to two-seeded.

Herbaceous, growing in marshy places in most parts of the world.

Order VIII.—TYPHACEÆ (Bull-rush).

Florets arranged on a spadix; mostly monœcious. Stamens definite. Ovary superior, single, one-celled, containing a solitary pendulous ovule. Fruit indehiscent. Leaves ensiform.

Acorus has been made the type of a new family (Acoraceæ) chiefly on account of its habit and difference in the perianth.

Arum, the type of another order (Araceæ) is known by its leafy spathe and very different habit.

The first part of the tribe is found in ditches and ponds in the northern parts of the world. Acorus and its congeners in temperate latitudes; Arum and its kindred genera within the tropics.

The British species belonging to the four families of this section, may be referred to their proper orders, by their habit alone. Pistiaceæ and Nayasaceæ comprehend only floating plants. Of Typhaceæ the species are erect and rather rigid, except Arum which is somewhat succulent, and Sparganium natans, which floats. The tribe of Pistiaceæ is easily known from Nayasaceæ by their simpler form, being without a stem, consisting only of small roundish floating leaves. The three species of Juncaginaceæ are rush-like plants with grassy leaves.

DIVISION B.—GLUMACEÆ.

This section is known by having, instead of a true perianth, herbaceous or scarious bracts (glumes), the former in Cyperaceæ, the latter in Graminaceæ.

Order IX.—CYPERACEÆ (Sedge).

Perianth either deficient or consisting of a herbaceous bract or scale (glume), florets usually in imbricated spikes or spiklets, or capitate or capitulate. Stamens definite, one to twelve. Ovary one-celled, with one erect ovule. Fruit a crustaceous or bony nucule (little nut). Culms (stems) often three-cornered. Leaves with entire sheaths.

They grow in watery places, in meadows, heaths, woods, on the sea shore, and on mountain tops, in all parts of the world.

Order X.—GRAMINACEÆ (Grass).

Perianth usually of two outer and two inner glumes. Stamens definite, one to six. Styles one to three, mostly two, with feathery stigmas. Embryo at the base of a farinaceous mass, sometimes with a secondary cotyledon alternate with the usual one. Culms cylindric, hollow, jointed. Leaves with a slit sheath, alternate.

This order is almost equally diffused over the whole earth.

The species belonging to these two large orders may be known from each other by the following diagnostic marks. In Cyperaceæ the stem (culm) is often three-angled, always solid, or filled with a spongy mass of cellular substance. In Graminaceæ the culm is always round and hollow, with enlarged joints. The bracts or floral appendages in Cyperaceæ are herbaceous (leafy); in Graminaceæ these parts are scarious. In Graminaceæ there are several bracts, in Cyperaceæ only one to each floret.

The sub-order Eriocaulineæ (Order Restiaceæ) arranged by Dr. Lindley, under Glumaceæ, comprehends the very rare Eriocaulon septangulare. The character of this subtribe is "flowers capitate, monœcious; perianth sepaloid (sepal-like); stamens 3-6, 2-4; seeds solitary, with rows of hairs."

The species of Cyperaceæ already described, are not fewer than 1000, and their maximum proportion to the other phænogamous plants, is probably in the northern parts of the temperate zone, and in the lower latitudes of the frigid, as in Lapland. The grasses exceed 2000, and their greatest proportion is in the northern temperate zone.

DIVISION C.

Perianth single or double, ovary superior.

Order XI.—JUNCACEÆ (Rush).

Perianth six-parted, mostly glumaceous, with six stamens usually inserted into the base of the segments. Ovary one to three-celled, one or many-seeded. Fruit, a three-valved capsule. Seed testaceous.

The British genera are known from the two orders of GLUMACEÆ by their regular verticillate perianth, and from

LILIACEÆ, in their having this part glumaceous and not petaloid (coloured and petal-like). They differ from the latter in the testa of their seed.

They grow chiefly in the colder parts of the world.

Order XII.—LILIACEÆ (LILY).

Perianth coloured. Stamens, six inserted into the pieces of the perianth. Ovary three-celled, many-seeded. Fruit capsular. Seeds in one or two rows.

Dr. Lindley has divided this family into the following sub-orders:—

1. TULIPINEÆ (Tulipea—*Lindley*), Tulip.

Perianthine, pieces scarcely cohering. Seed coat soft and pale.

2. SCILLINEÆ (Scilliæ—*Lind.*), Squill.

Seed coat, black and brittle.

3. ANTHERICINEÆ (Anthericeæ—*Lind.*), Asphodel.

Roots not bulbous as in the above tribes, but fibrous or fasicled.

4. CONVALLARINEÆ (lily of the valley).

5. ASPARAGINEÆ (Asparageæ—*Lind.*), Asparagus.

The order MELANTHACEÆ is intermediate between JUNCACEÆ and Anthericineæ: according to *Dr. Lindley*, it comprehends the British genera, Colchicum, Toffieldia, and Paris. The last, viz., Paris, disagrees in the number of perianthine pieces, stamens, styles, and in the fruit. The genera, with this exception, are said to be distinct from Liliaceæ by their tripartible fruit.

Plants of this order are chiefly found in temperate climes; a few grow within the tropics, where they are commonly arborescent.

Order XIII.—BUTOMACEÆ (FLOWERING-RUSH).

Perianth in six pieces; three inner coloured. Ovaries three to six. Fruit folliculous (a follicle), many-seeded. Seeds small, numerous, attached to a placenta covering the inside of the cells. Flowers conspicuous, umbellate.

In marshy places of Europe, and in tropical America.

Order XIV.—ALISMACEÆ (WATER-PLANTAIN).

Perianth, as in the Flowering-rush. Ovaries indefi-

nite, each one-celled, ovules single, or two attached to a sutural placenta. Fruit indehiscent.

Chiefly found in marshes in the northern parts of the world.

The Rush and Liliaceous tribes are distinguished from each other by their flowers. In the former they are uncoloured and minute, in the latter large, coloured, and mostly of great beauty. Butomaceæ and Alismaceæ are known from each other by their fructification.

SECTION D.

Perianth single or double; ovary inferior.

Order XV.—DIOSCOREACEÆ (YAM).

Diœcious; stamens six. Ovary three-celled, cells one to two-seeded.

Climbing and twining plants, with reticulated leaves like dicotyledons. Florescence spicate, bracteate.

All tropical plants, with the exception of Tamus. In those countries the Yam is an important article of food.

Order XVI.—IRIDACEÆ, *Lind.* (IRIS OR FLAG).

Perianth of six pieces. Stamens three, growing out of the base of the perianthine pieces. Capsule three-celled, with a loculicidal dehiscence (cells separating entirely). Seeds numerous, attached to the inner angle of the cell, sometimes to a central column. Leaves equitant, bracts spathaceous or scarious.

The species of this order abound about the Cape of Good Hope, and in the temperate parts of North America and Europe.

Order XVII.—AMARYLLACEÆ (AMARYLLIDACEÆ, *Lind.*) (Narcissus).

Perianth as in the Iris tribe. Stamens six. Anthers bursting inwardly, in Iridaceæ outwardly. Leaves ensiform but not equitant.

The greatest number of this beautiful tribe is found at the Cape. Several within the tropics; only a very few in the northern regions.

Order XVIII.—HYDROCHARACEÆ (*Frogbit*).

Perianth of three herbaceous outer pieces, and three inner pieces, coloured. Ovary solitary, one or many-celled. Fruit dry or succulent, indehiscent.

These are all aquatics, and grow in temperate parts of Europe, America, and the East.

Order XIX.—ORCHIDACEÆ, *Lind.* (Orchis.)

Perianth of five to six pieces, usually coloured. Stamens three, united in a column; the two lateral are abortive, and the central perfect, or the central abortive, and the two lateral perfect. Ovary one-celled, with three parietal placentæ. Style connected with the antheriferous column, and forming part of it. Stigma a viscid part in front of the column. Fruit a three-valved capsule, containing numerous seeds. Roots fleshy, divided, or entire, or fasciculate. Leaves often articulated with the stem, a rare circumstance in plants of the monocotyledonous orders.

Dispersed over all parts, except in climates remarkably dry. In the hot and moist shady forests of tropical America, India, and its islands, they flourish in myriads on trees, stones, and rocks, among other plants that delight in shade.

The solitary British species of Dioscoriaceæ is well distinguished from the plants of this section, by its climbing habit and dicotyledonous appearance. Iris is known from Amaryllaceæ by its three stamens, and ensiform, equitant foliage. Hydrocharis, by its having the three outer perianthine pieces herbaceous.

The individuals of the Orchis family may be certainly recognised by their remarkable flowers.

Dr. Lindley estimates the number of orchidaceous species at not less than 1500.

The inferior ovary, i. e., the fruit underneath the flowers, sufficiently distinguish this section from the preceding. Cyperaceæ are obviously distinct from Juncaceæ and Juncaginaceæ, by their single perianthine scale and their fruit. The order Nayasaceæ, which is more likely to be mistaken for the dicotyledonous aquatic orders Cheratophyllaceæ and Haloragineæ, is known from the former by its simple leaves, and from the latter by the same mark, and by its superior fruit.

CLASS III.

DICOTYLEDONS OR EXOGENS.

Seeds with two cotyledons and uncovered radicle; stem increasing outwardly; pith, wood, and bark in distinct portions, having medullary rays; leaves articulated, with usually branching nerves. The flowers, if complete, often have a quinary division.

This class comprehends the largest part of the vegetable kingdom, and the species are more highly developed than those in the other classes. They may generally be distinguished from the last class (Monocotyledons) by the pith, wood, and bark being arranged in distinct portions, also by the reticulated and articulated leaves; for, though the essential character of the class is founded on the constitution of the embryo, and peculiar development of the stem, the more obvious characters of the reticulated leaf, and the branching trunk, will usually be sufficient for determining the species belonging to this grand division.

DIVISION A.

Perianth wanting; the fertile florets, in some of the orders, are furnished with an indurated (woody) scale.

Of Coniferaceæ, Cycadaceæ, Taxaceæ, Equisetaceæ, and the recently formed order Gnetaceæ, Dr. Lindley has constituted a distinct class named Gymnosperms, characterized by the absence of styles and stigmas, the fertilizing grains of pollen being directly communicated to the ovules, which are uncovered.

Order XX.—CONIFERACEÆ (PINE OR FIR.)

Flowers monœcious or diœcious; barren florets arranged on a deciduous ament about a common rach; fertile florets in cones; ovary like a flat scale, without stile or stigma; ovule uncovered in 2s, on the surface of the ovary, inverted and open at the apex; fruit formed of the scales of the ovary enlarged and indurated; embryo with two or several cotyledons.

Trees or shrubs, resinous, branching; leaves linear or lanceolate, with entire margins.

They grow in all parts, from the frigid zones to the equinoctial regions. They are most abundant in North America.

The Yew (Taxus) has become the type of the family TAXACEÆ. (*Lind.* Introduction to the N. System.)

Order XXI.—AMENTACEÆ (OAK, BEECH, HAZEL, WILLOW, &c.)

"Flowers in catkins; carpels two or more, combined into a solid pistil."

This order contains most of the forest trees of Europe and North America. Several are inhabitants of the tropics.

Sub-Order, QUERCINEÆ, $\left\{\begin{array}{l}\text{Cupuliferæ,}\\\text{Corylaceæ,}\end{array}\right\}$ *Lind.*

(Oak, &c.)

Flowers monœcious; ovaries within a coriaceous involucre (cup), containing several cells and ovules, the greater part being abortive; ovules pendulous. Fruit a ligneous, or coriaceous one-celled nut.

Sub-Order, BETULINEÆ (Betulaceæ, *Lind.*) (Birch.)

Ovary two-celled, with pendulous ovules. Fruit one-celled by abortion, membranous, indehiscent.

Distinguished from Quercineæ by its fruit and the want of the cupule (cup.)

Sub-Order, MYRICINEÆ (Myricaceæ, *Lind.*) (Gale.)

Barren flowers, six-eight stamens; ovary one-celled, surrounded by scales, with a single erect ovule. Fruit drupaceous, or dry and dehiscent.

Sub-Order, SALICINEÆ (Salicaceæ, *Lind.*) (Willow, &c.)

Flowers monœcious, or diœcious, as in the preceding sub-orders; ovary one to two-celled, containing numerous erect ovules. Fruit capsular, two-valved, by which they may be distinguished from species of the oak and birch tribes.

This sub-order abounds in temperate regions, like the preceding, only extending farther north. The most northern ligneous plant known is a Salix, called the Arctic willow.

The two orders, viz., CONIFERACEÆ and AMENTACEÆ may be certainly known from each other by their leaves and their fruit.

In the order Coniferaceæ, the pine tribe (Abietineæ), is known from the cypress tribe (Cupressineæ) by the fruit; in the former, the scales are ligneous; in the latter, fleshy by coherence, forming a kind of berry. In the yew tribe (Taxineæ) the ovules are solitary in a pulpy berry.

The oak, birch, and poplar tribes are distinguishable by their fruit; so also is the gale tribe, and this is farther distinct by its aromatic leaves and resinous fruit.

Hippuris.—Sub-order, Halorageineæ, is without a perianth. The British species of Euphorbia have scarcely any perianth.

DIVISION B.—Perianth single.

Order XXII.—ULMACEÆ. (Elm.)

Perianth irregular parted; stamens definite; ovary superior, two-celled, containing single pendulous ovules. Fruit one to two-celled, indehiscent.

Natives of temperate regions in Asia, Europe, and North America.

Order XXIII.—CHERATOPHYLLACEÆ (HORN-WORT.)

Flowers monœcious; perianth many-parted; ovary superior, one-celled, bearing a single pendulous ovule; embryo with four cotyledons. Floating plants with multifid, cellular leaves.

They grow in European ditches.

Order XXIV.—URTICACEÆ (NETTLE.)

Flowers monœcious or diœcious; perianth herbaceous, cleft; stamens definite; anthers curved inwards in æstivation, when bursting, turned back with elasticity; ovary superior, single, with a single erect or suspended ovule. Fruit a simple, indehiscent nut, surrounded by the membranous, or by the fleshy perianth, or on a fleshy receptacle. Leaves alternate with membranous stipules.

The individuals composing this order are widely scattered over all parts of the earth; as well in the northern regions as in the hottest climes between the tropics.

This group contains the famous Bread-fruit tree from which the South Sea Islanders derive a considerable part of their subsistence.

The luscious fig and grateful mulberry, are included in the same tribe. The venomous nettle of Europe is not to be compared in virulence with exotic species. The Upas tree of Java is a member of this family.

The utility of others, as the Cannabis (Hemp), and the Hop (Lupulus), is well known.

Order XXV.—EUPHORBIACEÆ (EUPHORBIUM.)

Flowers monœcious or diœcious; perianth, if any, usually with glandular or scaly appendages; ovary superior, two or more celled, with solitary or twin suspended ovules in each. Fruit usually of three carpels, separating from their common axis.

Trees, shrubs, or herbaceous plants mostly abounding in an acrid milky juice.

This order exists most abundantly in Tropical America; it is also common in the tropical parts of Asia, and Africa, and at the Cape, and in the lower European latitudes. Of about 1500 species, which the order is supposed to comprehend, 120 are European, only sixteen of which are found in Britain, and but seven in Sweden.

Their properties are various, and increase gradually from stimulating to dangerous poisons; Ricinus (castor-oil plant) and Croton are examples of the former quality; Manchineel of the latter.

Dr. Lindley places Euphorbiaceæ among the polypetalous orders, i. e. such as have a double perianth and polypetalous corolla; because above one-half of the genera or species are furnished with these organs, viz. between Rhamnaceæ and Empetraceæ.

Order XXVI.—AMARANTACEÆ (AMARANTH.)

Perianth in three to five pieces; scarious, persisting, often surrounded with coloured bracts; stamens five, or some multiple of five; ovary single, superior, with one or mor pendulous ovules. Fruit a membranous utricle with lentula seeds. Leaves simple, opposite or alternate, without stipules.

Herbs or shrubs. Flowers capitate or spicate, mostl *coloured.*

Most common within the tropics. Only five are natives of Europe; twenty-one of extra-tropical America; five of extra-tropical Asia; one hundred and five are found in tropical America; and fifty-three in tropical Asia.

The leaves of many species are used as pot-herbs. The globe amaranth and cock's-comb are greatly esteemed for their brilliancy of colour and durability.

Order XXVII.—ARISTOLOCHACEÆ (BIRTH WORT.)

Perianth coloured, tubular, with three segments; stamens six to ten; ovary inferior; three or six-celled, with many ovules. Fruit dry or succulent. Leaves alternate, simple. Flowers axillary and alternate.

Most common in the equinoctial parts of the New world; also about the Mediterranean; sparingly in India and North America.

Of considerable reputation as tonic and stimulating medicines.

Order XXVIII.—CHENOPODIACEÆ (GOOSEFOOT.)

Perianth parted; stamens opposite the segments and of equal number; ovary single, superior, with a single ovule. Fruit membranous, sometimes baccate (a berry). Leaves alternate without stipules; sometimes opposite.

Mostly herbaceous.

This order, unlike the former, is most abundant in extra-tropical parts, especially in the northern parts of Europe and Asia.

Many are useful culinary herbs; as Spinach, Beet, Mangel-wurzel, &c.

Order XXIX.—POLYGONACEÆ (POLYGONUM OR BUCKWHEAT.)

Perianth parted, imbricated in æstivation; ovary supe-
, containing a single erect ovule. Fruit usually a trian-
ar nut, either uncovered or covered by the perianth.

Herbaceous plants with alternate leaves and stipules, forming by coherence a kind of sheath round the joint.

A widely dispersed order. Europe and Northern Asia produce Docks and Persicarias; the Levant, Rhubarb; the West Indies, Cocolobas; and the Arctic regions, Oxyria.

The leaves and young shoots contain oxalic acid; the roots are aperient.

Order XXX.—SANTALACEÆ (SANDERS WOOD.)

Perianth four to five, cleft; stamens equal in number to the segments, and opposite; ovary one-celled, containing one to four pendulous ovules. Fruit one-seeded.

Trees, shrubs, and herbaceous plants.

In Europe and North America the species are obscure weeds; in New Holland, the South Sea Islands, and the East Indies, they are trees and shrubs.

Order XXXI.—ELÆAGNACEÆ (OLEASTER.)

Flowers diœcious, with a four-parted perianth; ovary superior, one-celled, with a solitary ovule. Fruit enclosed within the succulent calyx.

A small family of trees and shrubs dispersed over the northern hemisphere from the north of Asia and America to the Equator.

Several British genera and species of the orders ILLECEBRACEÆ; CARYOPHYLLACEÆ, (sub-order, Alsineæ), Sagina apetala; RANUNCULACEÆ, (sub-orders, Clematineæ, Anemonineæ, Helleborineæ); SAXIFRAGINACEÆ, (Chrysoplenium); ROSACEÆ, (sub-order, Sanguisorbineæ;) ARALIACEÆ, (Adoxa); MONOTROPACEÆ, (Monotropa); and part of the order RESEDACEÆ, or genus Reseda, are apetalous; they are described under the orders to which they belong.

Order XXXII.—THYMELIACEÆ (MEZEREUM.)

Ovary tubular, coloured, with a four-cleft limb; stamens eight or four, growing in the interior of the tube; ovary solitary, containing a solitary pendulous ovule. Fruit drupaceous or nuciform. Shrubby, seldom herbaceous. Leaves exstipulate, entire. Flowers capitate or spiked, terminal or axillary.

Common in the colder climates of Asia and South America; few in Europe; many at the Cape and in New Holland.

The British species belonging to the orders in this section may be referred to their proper families by the following diagnostic marks. ULMACEÆ are known by their ligneous habit, being large trees. CHERATOPHYLLACEÆ, by their aquatic habit. The difference between aquatics and marsh plants is, that the former grow, flower, and produce their fruit in the water. The latter (marsh plants) grow in water or in watery places, but elevate their stems, leaves, and flowers above the water. URTICACEÆ and EUPHORBIACEÆ are distinguished by the former having the stamens definite, the perianth persistent, and the fruit simple. URTICACEÆ and CHENOPODIACEÆ are separated by the former having rough stipulate leaves. POLYGONACEÆ are known from the Nettle tribe, by the coherence of the stipules round the stem, forming an *ochrea*, or boot. POLYGONACEÆ are distinct from CHENOPODIACEÆ by the same character, an ochreous petiole. SANTALACEÆ are known from the kindred families of this section by their inferior fruit. ELEAGNACEÆ are commonly distinguished from THYMELIACEÆ by their leprous leaves, and by the uncoloured, less developed perianth.

DIVISION C.

Perianth double. Corolla monopetalous.

SECTION A.—Ovary superior.

Sub-Section 1.—Stamens fewer than five.

Order XXXIII.—PLANTAGINACEÆ. (PLANTAIN OR RIB-GRASS.)

Calyx four-parted; corolla membranous, both persistent; ovary two, rarely four-celled; ovules erect, one, two, or many. Fruit capsular, membranous, bursting transversely. Florescence spicate, rarely solitary. Usually stemless leaves. Leaves usually flat and ribbed, rarely fleshy.

Dispersed everywhere.

Order XXXIV.—PLUMBAGINACEÆ. (Thrift.)

Calyx tubular, plaited; corolla regular (sometimes pentapetalous); ovary single, bearing a single ovule suspended from the point of an umbilical cord growing from the bottom of the cell. Fruit utriculous. Leaves alternate, or clustered, slightly sheathing at the base.

Natives of salt marshes and sea coasts, or mountainous tracts, from Greenland to Cape Horn.

Order XXXV.—OROBANCHACEÆ. (Broom-rape.)

Calyx parted; corolla irregular; ovary one-celled; ovules many, on two to four parietal placentas. Fruit capsular, covered by the withered corolla, one-celled, two-valved.

Herbaceous plants, destitute of leaves. The stems are covered with brown, or pale colourless scales.

Common in the southern parts of Europe, North America, middle and north of Asia, and north of Africa.

Order XXXVI.—SCROPHULARACEÆ. (Figwort.)

Calyx of four to five sepals, frequently by coherence forming a monosepalous calyx; corolla almost regular, four to five cleft or parted, or irregular and two-lipped, tubular, imbricated in æstivation. Stamens opposite the sepals; ovary two-celled; many ovules attached to one or two placentæ, which adhere to the dissepiment; embryo erect or pendulous, or between the two positions.

Herbaceous and frutescent plants make up this order.

Found in all parts of the world, from Melville Island to the shores of Terra del Fuego.

They are generally acrid; the roots of several are aperient and emetic.

Order XXXVII.—LENTIBULACEÆ (Butterwort.)

Calyx parted, persistent; corolla irregular, bilabiate and horned, bearing on its base two stamens; ovary one-celled, bearing many ovules on a central placenta.

Aquatics or marsh plants.

Natives of marshy places, ponds, and rivers in all parts, especially within the Tropics.

Order XXXVIII. LABIATÆ, or LAMIACEÆ, *Lind.* (Mint, &c.)

Calyx tubular, persisting, either regular, having five to ten teeth, or two-lipped, with three to ten teeth. Corolla tubular, bilabiate, or almost regular. Ovary deeply parted into four lobes on a fleshy disk. Fruit four small nuts enclosed within the persistent calyx, often fewer by abortion. Stem four-angled. Leaves opposite, without stipules, replete with receptacles of aromatic oil. Flowers in axillary cymes resembling whorls, as indeed they are most commonly denominated. Sometimes solitary.

Natives of northern temperate regions, and chiefly between the fortieth and fiftieth degrees of north latitude. They are not to be found in the extreme north, as Melville Island. They form 1-40th of the Lapland Flora, and about the same proportion of the American Equinoctial Flora of Humboldt.

Their properties are tonic and stomachic. Camphor exists in the whole, and is yielded in abundance by Sage (Salvia), and Lavender.

Order XXXIX.—VERBENACEÆ (Vervain.)

Calyx as in Labiatæ. Corolla tubular, usually with an irregular limb. Ovary two to four-celled, each bearing usually erect or pendulous single ovules. Fruit nuciform, sometimes baccate.

Distinguished from the preceding order by its fruit.

Common in the Tropical regions; rare in Europe, North America, and Northern Asia.

Order XL.—OLEACEÆ (Olive).

Calyx parted. Corolla four-cleft. Stamens two. Ovary single, two-celled, each bearing two pendulous ovules. Fruit drupaceous, berried, or capsular.

Trees and shrubs. Chiefly found in temperate latitudes. Oil is obtained from the pericarp, and manna from several species of Ash, especially Fraxinus rotundifolia.

This order, which is by Dr. Lindley placed immediately before his class GYMNOSPERMS, is put here in accordance with the principles of arrangement, and not because of its affinity to these orders.

The Plantain tribe is known from the Thrifts and Leadworts by its colourless corollas, and its two-celled ovary. By the former mark it is known from all the other families of this section. OROBANCHACEÆ and SCROPHULARACEÆ are easily distinguished by their habit. LABIATÆ and VERBENACEÆ are well distinguished by their fruit. LENTIBULACEÆ by their two stamens; and OLEACEÆ are trees and shurbs. The genus Verbascum, which has been very properly transferred from SOLANACEÆ to SCROPHULARACEÆ by Dr. Lindley, is easily known from all the British species of the former by its capsular fruit. The British Solanaceæ have all baccate fruit, with the exception of Datura, which has large thorny capsules. Verbascum agrees in the number of stamens with the Solanaceous genera.

Sub-Section 2.—Stamens, five or more.

Order XLI.—BORAGINACEÆ (BORAGE, &c.)

Calyx persistent, four to five-parted. Corolla five-cleft, usually regular, with imbricated æstivation. Ovary four-parted, as in Labiatæ, with four pendulous ovules. Fruit four nuts, or fewer by abortion. Stem round, leaves alternate, very rough, whence originated the old name of the order, Asperifoliæ.

Chiefly found in the temperate parts of the northern hemisphere, especially in Europe.

Their properties are mucilaginous and emollient.

Order XLII.—SOLANACEÆ (NIGHTSHADE, &c.)

Calyx five-parted, persisting. Corolla five-cleft, deciduous, imbricated in æstivation. Ovary two-celled, or many-celled, containing many ovules on a double placenta, adhering to the dissepiment. Fruit capsular or baccate.

Found in most parts between the Arctic and Antarctic circles, but not within them.

The properties of this order are stimulant and narcotic. The fruit is frequently poisonous, as the berries of the Atropa, Solanum nigrum, &c.

The roots of Solanum tuberosum (potato) are an excellent dietetic article. The fruit of several of the same genus, as the egg plant and all the Tomato tribe, are used in cookery, preserves, &c.

This order, which approaches nearest to SCROPHULARACEÆ, is put here in conformity with this mode of arrangement.

Order XLIII.—GENTIANACEÆ (GENTIAN.)

Calyx persistent. Corolla cleft or toothed, bearing the stamens, which are of an equal number with the lobes of the corolla. Ovary one or two-celled; in the one-celled genera the edges of the valves being turned inwards, bear the ovules; in the genera with two cells these are attached to a central placenta.

Generally herbaceous, smooth plants, with entire, exstipulate, sessile, opposite leaves, rarely alternate. Flowers terminal, or axillary.

Very generally diffused from the coldest parts of Europe, to the hottest of South America and India.

The bitter principle of this order renders them tonic, febrifugal, and stomachic.

Order XLIV.—APOCYNACEÆ (PERIWINKLE.)

Calyx five-parted. Corolla five-lobed, twisted in æstivation, deciduous, bearing five stamens. Ovaries one to two-celled, bearing numerous erect ovules. Fruit folliculous, capsular, or drupaceous.

Trees or shrubs, with opposite exstipulate leaves.

Chiefly natives of Equinoctial regions, and at the Cape.

Aperient, febrifugal, and tonic.

Order XLV.—PRIMULACEÆ (PRIMROSE.)

Calyx and corolla five-cleft, regular. Stamens five, inserted on the corolla. Ovary one-celled, with many ovules attached to a central placenta. Fruit a valvular capsule, or opening with a pyx or lid.

Herbaceous plants.

Common in the colder parts of the world; rare within the tropics.

Great favourites of the florist.

Order XLVI.—AQUIFOLIACEÆ (HOLLY.)

Calyx of four to six sepals. Corolla four to five-parted, both organs imbricated in æstivation. Stamens inserted into the corolla, and alternate with its segments. Ovary fleshy, two to six cells, with solitary pendulous ovules. Fruit juicy, with two to six bony nuts.

Trees and shrubs, with coriaceous leaves.

There is but one European species, viz., Common Holly; the rest are found in various parts of the world, as the West Indies, South and North America, Cape, &c.

This order is placed here in deference to the opinion of Dr. Lindley.

Order XLVII.—CONVOLVULACEÆ (BINDWEED.)

Calyx in five portions. Corolla five-lobed, with plicate æstivation, bearing on its base five stamens. Ovary two to four-celled, rarely with one, bearing a few erect ovules on the base of the dissepiment.

Herbs or shrubs, usually twining. Leaves without stipules.

Rare in cold climates, plentiful within the tropics.

The well-known medicines, Jalap and Scammony, are obtained from this order.

Order XLVIII.—CUSCUTACEÆ (DODDER).

Calyx and corolla four to five-parted, imbricate in æstivation. Ovary two-celled, bearing two ovules, erect, and collateral. Embryo without cotyledons, consequently the plants are destitute of leaves. Habit parasitical, twining.

Natives of all parts.

Order XLIX.—POLEMONIACEÆ.

Calyx and corolla five-parted, or cleft, or lobed. Ovary three-celled. Fruit capsular three-valved.

Herbaceous plants, with opposite, sometimes alternate leaves.

Common in North and South America, rare in Europe and Asia, unknown in tropical countries.

Order L.—ERICACEÆ (HEATH).

Calyx and corolla four to five-cleft, rarely of four to five pieces. Stamens equal, or double the number of segments. Ovary many-celled, containing many pendulous ovules on a central placenta. Shrubs with evergreen, exstipulate leaves.

Most abundant at the Cape, North and South America, less common in Asia. Of the genus Erica, not a single species has been observed in America.

Order LI.—PYROLACEÆ (WINTERGREEN).

Calyx of five sepals. Corolla four to five-toothed, regular. Stamens twice as numerous as the teeth of the corolla. Ovary four to five-celled, many-seeded. Capsular fruit, dehiscent, with a central placenta.

Mostly herbaceous plants.

Found in North America, Europe, and Northern Asia, in plantations, &c.

Order LII.—MONOTROPACEÆ.

Similar in essential character to PYROLACEÆ—of very different habit, being parasitical, leafless, pale, succulent plants.

Chiefly found in Beech, Fir, and other woods in Europe, Asia, and North America.

BORAGINACEÆ are distinguished from all the orders in this sub-section by its fruit. SOLANACEÆ from GENTIANACEÆ by the alternate leaves; and in all the British species by the fruit. GENTIANACEÆ from APOCYNACEÆ, by habit: the latter being frutescent, the former herbaceous. PRIMULACEÆ are distinguished by the central placenta, and valvular or pyxid capsule. AQUIFOLIACEÆ are well known by their arborescent habit, and their evergreen coriaceous leaves. CONVOLVULACEÆ by their twining herbaceous habit, and by their few and large seeds. CUSCUTACEÆ are leafless, twining, and parasitical. POLEMONIACEÆ are distinct from CONVOLVULACEÆ by their three-celled ovary, and their generally erect habit. PYROLACEÆ, MONOTROPACEÆ, and ERICACEÆ, are known from the other families of this sub-section, by their many-celled ovaries, or by their habit. The Heath tribe is known from MONOTROPACEÆ and PYROLACEÆ by habit, viz. small trees or shrubs. MONOTROPACEÆ from PYROLACEÆ by habit, parasitical, and leafless stems.

SECTION B.—Ovary inferior.

Order LIII.—VACCINACEÆ (BILBERRY).

Calyx and corolla four to six-lobed, or entire. Stamens double the lobes of the corolla, inserted into a disk. Ovary four to five-celled, one or many-seeded. Fruit, a berry. Seeds minute. Shrubby plants, with alternate coriaceous leaves.

They grow very abundantly in North America, and in high latitudes; sparingly in Europe.

Order LIV.—CAMPANULACEÆ (BELL FLOWER).

Calyx usually five-lobed, persisting. Corolla inserted on the calyx, regular, the lobes corresponding with those of the calyx. Stamens also corresponding with the lobes of the corolla, and inserted on it. Ovary containing two or more cells, bearing many ovules attached to a central placenta. Fruit capsular, opening for the emission of the seeds by lateral apertures, or by valves at the apex.

Mostly herbaceous plants, with exstipulate leaves. Flowers blue or white, rarely yellow.

They are found in the greatest plenty within lat. 36° and 47° of the north hemisphere. The mountainous districts of Switzerland, Italy, Greece, Asia, &c., are their chief localities. They are rare in hot climates.

They abound in a rather acrid milky juice, and the roots of some are esculent.

Order LV.—LOBELIACEÆ (LOBELIA).

Distinct from Campanulaceæ by their irregular corolla, which is so cleft that the segments cohere unilaterally.

They inhabit totally different regions, being usually found within, or on the borders of the tropics.

Their milky juice is exceedingly acrid. Some are active aperients, and some very venomous.

Order LVI.—COMPOSITÆ.

Calyx a slight rim attached to the apex of the carpe sometimes *wholly deficient; sometimes supplied by scales, or bristles, or hairs, named pappus. Corolla either ligulate (strap-shaped), or funnel-shaped, with four to five teeth.* Stamens equal to the number of teeth, with cohering anthers (hence the term Syngenesious). Ovary one-celled, bearing a single erect ovule. Fruit, a one-seeded indehiscent pericarp (Akenium). Florets collected in dense heads, surrounded by an involucre.

This is the largest assemblage of plants, and the most extensively diffused.

In some parts, amounting to one-half of the phænogamous species, in others one-sixth, and in some one-twentieth. They have their maximum within the tropics of America. In the northern latitudes they are herbaceous, towards the equator they are chiefly frutescent. In St. Helena they are chiefly trees.

Many plants of this group are dietetic, and many medicinal.

Order LVII.—DIPSACEÆ (Teasel).

Calyx inclosed in a scarious involucel. Corolla tubular, inserted on the calyx, with an irregular four to five-lobed limb. Stamens four, with distinct anthers. Ovary one-celled, containing a single pendulous ovule. Florets collected on a common receptacle, surrounded by a many-leaved involucre.

Commonly found in the south of Europe, and north of Africa.

The heads of Teasel (Dipsacus fullonum) is used by clothiers for raising the nap on cloth.

Order LVIII.—VALERIANACEÆ (Valerian).

Calyx minute, or pappus like. Corolla tubular, on th top of the ovary, regular or irregular, three to six-lobed bearing the stamens (one to five) with its tube. Ovar one-celled, sometimes two abortive cells, with a solitar pendulous ovule.

Herbaceous plants with exstipulate, opposite leaves, and corymbose, panicled, or capitate flowers.

Natives of the north of India, Europe, and South America; rare in Africa and North America.

Order LIX.—*STELLATÆ* or GALIACEÆ, *Lind.* } MADDER and GALIUM, &c.

Calyx four to six-lobed. Corolla rotate, or tubular, regular, growing on the calyx, and with an equal number of lobes. Stamens four to six. Ovary two-celled, each bearing a solitary erect ovule. Fruit a didymous, indehiscent, pericarp.

Herbaceous plants, with minute flowers, whorled exstipulate leaves, and angular stems.

Extremely common in the northern parts of our hemisphere. Madder is an important dye. The roasted grains of Galium are said to be a good substitute for coffee.

Order LX.—CAPRIFOLIACEÆ (HONEYSUCKLE.)

Calyx four to five-cleft. Corolla rotate, or tubular, regular or irregular, sometimes polypetalous. Stamens equal in number to the lobes of the corolla, and alternate with them. Ovary one to three or four cells, with one, or several ovules in each. Fruit dry or fleshy.

Shrubs or herbaceous plants, with opposite, exstipulate leaves.

Dr. Lindley separates the Dog-wood tribe (Cornus) from this order, chiefly because of the polypetalous corolla.

Natives of the northern parts of Europe, Asia, America; scarcely known in the southern hemisphere.

Order LXI.—LORANTHACEÆ (MISSELTOE.)

Calyx minute. Corolla sometimes of three to four or eight petals. Stamens equal in number to the divisions or number of petals. Ovary one-celled, with a pendulous ovule. Fruit juicy; the seed solitary, with a membranous testa.

Parasitical shrubby plants.

Chiefly found in tropical parts.

Order LXII.—CUCURBITACEÆ (Gourd).

Calyx five-lobed, sometimes obsolete. Corolla five-parted. Stamens five. Ovary one-celled, with three parietal placentæ, with numerous erect ovules. *Fruit fleshy; stem* succulent, climbing by tendrils formed of abortive stipules. Leaves rough.

Natives of countries within the tropics; rare in northern latitudes.

The Melon, Cucumber, &c. are useful articles of food. Some afford useful medicines, as the Cucumis Colocynthis, from which the drug Colocynth is extracted.

The order VACCINACEÆ is known from its kindred orders by habit, (shrubby). CAMPANULACEÆ by their large regular bell-shaped flowers; numerous seeds, &c. LOBELIACEÆ differ from CAMPANULACEÆ in having an irregular corolla. COMPOSITÆ and DIPSACEÆ are known by their capitate florescence. The latter are distinct from the former, in having unconnected anthers. These organs are attached together about the style in COMPOSITÆ; hence the Linnæan name Syngenesia.

The order VALERIANACEÆ differs from the former two orders in wanting the common involucre, the florescence being panicled, corymbose, or capitate. STELLATÆ, or GALIACEÆ, are known by their whorled leaves, and dicarpous fruit. The remaining three orders are distinguished by their baccate fruit, and by their shrubby or climbing habit, viz.—CAPRIFOLIACEÆ are shrubs; CUCURBITACEÆ are herbaceous and climbing; Viscum (LORANTHACEÆ) is frutescent, but is separated from CAPRIFOLIACEÆ by its solitary ovule.

DIVISION D.

Perianth double, corolla polypetalous.

SECTION A.—Ovary superior.

Sub-Section 1.—Stamens definite, free.

Order LXIII.—LYTHRACEÆ (PURPLE WILLOW HERB.)

Calyx monosepalous, tubular; petals inserted between the lobes of the calyx, very deciduous, sometimes deficient.

Stamens inserted into the tube of the calyx. Ovary two to four-celled, containing numerous ovules attached to a central placenta. **Fruit capsular,** membranous, covered by the calyx.

Mostly herbaceous plants.

Chiefly found in Europe and North America.

Lythrum Salicaria is found in New Holland, and it is the only one of the family hitherto described from that country.

Some of them are astringent, and others vulnerary.

Order LXIV.—ILLECEBRACEÆ.

Calyx five-sepalous, rarely three or four, sometimes cohering. Petals minute, or deficient, inserted as in Lythraceæ. Ovary one, rarely three-celled; bearing one or more ovules, on a central placenta; when solitary suspended from a basilar cord, as in Plumbaginaceæ.

They mostly grow in barren places in the south of Europe, and North of Africa, Cape, North America, &c.

Order LXV.—TAMARICACEÆ (Tamarisk).

Calyx four to five-parted. Petals withering. Stamens equal in number to the petals, or twice as many; sometimes monodelphous, (connected in one parcel). Ovary one-celled. Fruit capsular, one-celled, three-valved. Seeds attached to three basilar, or valvular placentas.

Shrubs or herbs. Leaves alternate, minute.

This small order is confined to the northern hemisphere of the old world.

Order LXVI.—PORTULACEÆ (Purslane.)

Sepals two, rarely three or five, cohering. Petals five, sometimes three, four and six, either distinct, or cohering in a short tube, occasionally deficient. Stamens inserted in the base of the calyx, or on the torus (disk). Ovary one-celled, placenta central.

Succulent plants, with alternate, entire, exstipulate leaves.

One species only is found in Europe, one-fourth are natives of the Cape, one-fourth of South America. The rest are found in various parts.

Order LXVII.—DROSERACEÆ (SUNDEW).

Sepals and petals five each. Ovary simple (one-celled). Fruit capsular, three to five valves, bearing the placenta either at the base, or in their centre. The leaves are remarkable for their circinate vernation.

Natives of marshy moors, morasses, fenny places, in all parts.

Order LXVIII.—CRUCIFERÆ or BRASSICACEÆ, *Lind.* } CRUCIFORM PLANTS.

Sepals four, petals four, both cruciate, (at right angles to each other). Stamens six, two of which are shorter than the rest. Ovary one-celled, with parietal placentæ, meeting in the middle, and forming a spurious dissepiment. Fruit a silicle, or silique (pouch or pod), one-celled, or spuriously two-celled. Ovules and seeds attached in single rows to each side of the placenta, by an umbilical cord.

Herbaceous plants, with alternate leaves. Flowers usually yellow or white.

Mostly belonging to Europe and Northern Asia. Within the frigid zone of the northern hemisphere, 205 species are described. In the temperate zone of the northern hemisphere 548. In the temperate zone of the southern hemisphere 86. Within the tropics 30.

The qualities of this very important order are antiscorbutic, and stimulant, with an acrid flavour. They contain a large proportion of azote. When the acridity is dispersed through the enlargement of the succulent matter, many become wholesome food, as radish, sea-kale, turnip. The seeds abound in a fixed oil.

Order LXIX.—RESEDACEÆ (MIGNONETTE).

Calyx many-parted. Petals unequal, torn, or sometimes deficient. Ovary three-lobed, one-celled, with many ovules attached to three parietal placentas. Fruit capsular, opening at the apex.

Herbaceous plants. Chiefly found around the shores of the Mediterranean, and the adjacent islands.

Order LXX.—VIOLACEÆ (Violet.)

Sepals five, usually elongated at the base. Petals five, equal or unequal. Stamens equal in number to the petals. Ovary one-celled, many ovules on three parietal placentas, rarely one-seeded. Leaves simple, stipulate, with an involute vernation.

Natives of Europe, Siberia, and America. In South America, they are chiefly shrubs. The northern species are all herbaceous.

Their properties are emetic, aperient and antiscorbutic. Ipecacuanha is a drug obtained from this tribe.

Order LXXI.—FRANKENIACEÆ.

Sepals four to five, united in a furrowed tube. Petals equal in number, and alternating with the sepals. Ovary one-celled, with many ovules attached to the margins of the valves. Very branchy plants, with opposite, exstipulate leaves, sheathing at the base.

For the most part natives of the South of Europe, and the North of Africa.

Order LXXII.—ACERACEÆ (Maple).

Calyx of four to nine sepals, or divisions. Corolla inserted on a fleshy disk, with as many petals as there are divisions of the calyx. Stamens usually eight. Fruit two, some are united, each one-celled, containing one or two seeds.

Trees with opposite exstipulate leaves.

Natives of Europe, North of Asia, and North America.

One species, Acer saccharinum, yields sugar in abundance.

Order LXXIII.—ÆSCULACEÆ (Horse-chestnut).

Calyx campanulate, five-lobed. Petals five, or four by abortion. Ovary three-cornered, three-celled, with two ovules in each. Fruit one, two or three-valved, with an equal number of cells and seeds, unless when decreased by abortion. Seed large, with a smooth shining episperm, and a broad hilum.

Trees, with quinate or septenate, exstipulate leaves.

Natives of North America, and Northern India. Not considered a British order. It is common in plantations.

Order LXXIV.—RHAMNACEÆ (BUCKTHORN).

Calyx monosepalous, four and five-cleft. Petals inserted *into the orifice of the calyx. Stamens opposite the petals. Ovary two to three, or four-celled, with single* erect ovules in each. *Fruit either fleshy and indehiscent, or dry and separating in five divisions.*

Trees or shrubs with simple exstipulate leaves.

Natives of all parts except the frigid zones.

The berries of some are violent purgatives.

Order LXXV.—CELASTRACEÆ.

Sepals four to five, on an expanded torus. Petals inbricate in æstivation. Ovary immersed in the fleshy disk, and adhering to it, with three to four cells. Cells one or many-seeded. Ovules attached to a short funiculus. Fruit either capsular, with septiferous valves, or drupaceous, with a one or two-celled nut.

Shrubs, with simple leaves.

Natives of the warmer parts of the world, but more abundant beyond than within the tropics.

Order LXXVI.—STAPHYLLACEÆ (BLADDER-NUT).

Sepals five, connected at the base, coloured. Petals five, alternate, both imbricated. Stamens five. Disk urceolate. Ovary two or three-celled. Ovules erect. Fruit membranous or fleshy. Seeds with a bony testa. Leaves opposite, pinnate, with common and partial stipules.

The few species of this order are shrubs, and they are scattered over most parts of the earth.

LYTHRACEÆ may be recognised by the monosepalous tubular calyx. ILLECEBRACEÆ, by their pentasepalous calyx and minute petals. The only British species of TAMARICACEÆ is distinct from the preceding, by its frutescent upright habit, and minute scale-like leaves. The solitary British species of PORTULACACEÆ (Montia), is known by its disepalous calyx, and its petals cohering by their claws, forming a monopetalous corolla.

The DROSERAS (Sundews,) are known by their circinate vernation. The CRUCIFEROUS plants, by their tetrapetalous corolla, and their fruit. RESEDACEÆ, by the three-toothed, one-celled ovary, with three parietal placentas. The British Violets are known by their pentapetalous corolla, and with the sepals elongated at the base. The species of **Frankeniaceæ** are known by the tubular calyx formed by the union of the sepals, and also by the sutural *placentas.*

The four following orders, of which one, Æsculaceæ, is reputed exotic, can be easily distinguished by their fruit.

Order LXXVII.—CARYOPHYLLACEÆ (Pink.)

1. *SILENACEÆ (Dianthus.)* and 2. ALSINACEÆ (Chickweed.) — *Lindley.*

1. Calyx tubular, consisting of four to five coherent sepals. Petals four to five-clawed. Stamens double the number of petals. Ovary stipitate, one-celled, with a central placenta, and many ovules. —

Herbaceous, with jointed stems and opposite entire leaves.

2. The second group is distinguished by the five distinctly leaved calyx, and the sessile petals, i. e. without claws.

They abound about hedges, and waste places, on mountains and rocks, in the temperate and frigid regions.

Some of them are splendid flowers, many are obscure weeds.

Order LXXVIII.—CRASSULACEÆ (House-leek.)

Calyx of from three to twenty sepals. Petals either distinct or cohering, inserted into the base of the calyx. Stamens inserted with the petals, either equal or double in number. Ovaries of the same number as the petals; with the ovules attached to the margins of the sutures.

Succulent herbs or shrubs.

Of 272 species of which this order consists, 133 belong to the Cape, 52 to Europe, 18 are found in the Canaries, 18 in the Levant, 12 in Siberia. The rest are dispersed over North and South America, Barbary, New Holland, and the East.

They are found in the driest places, on rocks, old walls, and sandy plains, exposed to the heaviest dews, and the most raging heats.

Order LXXIX.—SAXIFRAGACEÆ (Saxifrage.)

Calyx of four to five sepals, more or less cohering at the base. Petals five, inserted between the lobes of the calyx, sometimes deficient. Ovary in some half inferior, usually of two carpels, diverging at the apex; one or two-celled, with parietal or central placentæ. Herbaceous plants. Leaves alternate, exstipulate, succulent.

Found in mountainous tracts, on rocks, and walls, in groves and boggy places, in Europe, and the northern parts of America, and Asia.

Berberaceæ agrees with this subsection in the unconnected, definite stamens. In essential character, it seems nearer to the next group of orders wherein it is placed.

Cornaceæ, (*Lind.*) part of the order Caprifoliaceæ, have a polypetalous corolla, and free, definite stamens. See order Caprifoliaceæ.

Viscum is also polypetalous. See order Loranthaceæ.

Order LXXX.—BALSAMINACEÆ, *Lind.* (Balsam.)

Sepals five, or three by abortion, the odd one with a spur. Petals five, adhering or distinct, by combination three, irregular. Stamens five, alternate. Ovary five-celled, with five or two, or many-seeded cells. Fruit capsular, with five elastic valves, and five cells formed by the placentæ. Leaves simple, without stipules.

Natives of damp shady places.

One is found in Europe, two in North America, one in Madagascar, and the remaining few in the East Indies and Asia.

The genera in the tribe Silenaceæ may be known from the preceding by their unguiculate petals, usually bearing processes called a crown, also by their jointed stems. The next group Alsinaceæ, by their stamens being double the number of the petals, or a less number, four to three, seldom equal. Dr. Lindley proposes another mark, i. e. exstipulate leaves, and removes all such as have stipules to the Order Illecebriaceæ. Crassulaceæ may be known by the ovaries equal in number to the petals, and by their succulent habit. Balsaminaceæ by the irregular corolla, and Saxifragaceæ by the capsular dicarpous fruit.

Sub-Section 2.—Stamens definite, united by their filaments.

Order LXXXI.—GERANIACEÆ (Geranium.)

Calyx of five-ribbed, persisting sepals. Petals five. Stamens two to three times as many as the petals. Ovary five-celled, surrounding an axis, each one-seeded. Fruit of five pieces, cohering, each terminated by the persisting style, which on maturity curls back, carrying the pericarp along with it.

Herbaceous plants, or shrubs.

The genus Pelargonium is chiefly found at the Cape; Erodium and Geranium are natives of Europe, North America, and the North of Asia.

Order LXXXII.—OXALACEÆ (OXALIDACEÆ, *Lind.*) (Wood Sorrel.)

Sepals five, persisting and equal. Petals five, with a twisted æstivation. Stamens ten. Ovary five-celled, with a few ovules fixed to the axis.

Plentiful in America and the Cape of Good Hope; rare in other parts.

Order LXXXIII.—LINACEÆ (Flax.)

Sepals three, four, or five. Petals equal in number, clawed, æstivation twisted. Ovary as many celled as there are sepals, with solitary, compressed, pendulous ovules. Fruit capsular, opening by two valves at the apex. Leaves entire, exstipulate.

Natives of Europe, North and South America.

Order LXXXIV.—POLYGALACEÆ (Milkwort.)

Sepals five, irregular, the two interior petaloid. Petals three, the largest being keeled (crested.) Stamens eight or four. Ovary compressed, two to three cells. Ovules solitary, pendulous.

Shrubs or herbaceous plants, with exstipulate leaves.

Polygala is found in moist regions, in bogs, heaths, woods, and hills; the rest of the genera are not so generally diffused.

Order LXXXV.—FUMARIACEÆ (FUMITORY.)

Sepals two, deciduous. Petals four, one or two, saccate at the base. Stamens six, in two parcels. Ovary one-celled, with horizontal ovules, (neither erect nor pendulous.) Fruit a one or two-seeded nut, or a polyspermous silique (pod).

Herbaceous plants, with multifid leaves, and purple, white or yellow flowers.

Temperate latitudes of the Northern hemisphere, in fields, hedges, woods, &c.

Order LXXXVI.—LEGUMINOSÆ (FABACEÆ, *Lind.*) (PEA.)

Calyx five-parted or toothed. Petals five, or four, three, two, one, or none, by abortion. Stamens sometimes indefinite. Ovary simple, one-celled. Fruit leguminous or drupaceous. Seeds attached to the suture.

Herbaceous, or shrubby, or arboreous. Pedicels articulate, bracteate.

About 1000 species are natives of tropical countries, 1277 of the Northern hemisphere, beyond the tropic, and 407 to the south of the tropic.

GERANIACEÆ may be known by the five single-seeded pericarps, attached to a central column, which forms a long beak. OXALACEÆ, from this and the following, by the five-celled capsular fruit, and by having ten stamens. Linum has five. Polygala is distinct in habit and in irregular corolla. FUMARIACEÆ may be distinguished by the six stamens in two parcels, and by its succulent prostrate habit. (Br. species.) LEGUMINOSÆ are known by their leguminous fruit, and compound leaves, either pinnate or trifoliated, with jointed leaflets.

Sub-Sect. 3.—Stamens indefinite, free, or united.

Order LXXXVII.—HYPERICACEÆ (TUTSAN.)

Sepals four or five. Petals four or five. Stamens in three or more parcels. Ovary of several cells, with central placentæ. Capsular or baccate fruit, many-valved. Seeds numerous, minute.

Herbaceous plants, shrubs, and trees, with a resinous juice.

Very generally diffused, on mountains, valleys, bogs, dry pastures, meadows, heaths, &c.

Europe affords 19, North America 41, South America 21, Asia 24, Africa 7, New Holland 5, Canaries 5; a few are common to Europe and Asia.

The juice of certain species is slightly purgative and febrifugal.

Order LXXXVIII.—MALVACEÆ (Mallow.)

Sepals five, rarely three or four. Petals equal in number to the sepals, æstivation twisted. Stamens united by a membranous web at their base. Ovary consisting of several ovules united around a common axis, distinct or coherent. Fruit capsular or baccate. Carpels with one or many seeds, sometimes united, sometimes separable or separate.

Herbaceous, frutescent or arborescent, with alternate, stipulate leaves.

Found chiefly in the tropics. None in the frigid zone. In Æquinoctial America, they form $\frac{1}{47}$ of the phænogamous plants; in North America, $\frac{1}{125}$; in France, $\frac{1}{145}$; Sweden, $\frac{1}{233}$. None are found in Lapland.

They abound in mucilage, and are destitute of all poisonous qualities.

Order LXXXIX.—TILLIACEÆ (Linden.)

Sepals and petals four or five. Ovary of four to ten carpels. They are known from Malvaceæ and kindred orders by their glandular disk.

Trees, shrubs or herbs, with simple, stipulate, alternate leaves.

Most of this order are tropical plants, a small part is peculiar to the northern parts, forming plantations.

Order XC.—ELATINACEÆ.

Sepals three to five. Petals ditto. Stamens usually twice as many as the petals. Ovary three to five-celle with numerous ovules. Fruit capsular, valvular. Ste *fistulous, rooting. Leaves opposite, stipulate.*

Placed by Dr. Lindley near Order Cistinaceæ.

Order XCI.—*CISTINACEÆ* (Cistus.)

Sepals five, persisting. Petals five, very fugaceous, with rumpled æstivation. Stamens free. Ovary one or many-celled, bearing many ovules with the foramen at their apex. Fruit capsular, three or five-valved, with parietal placentæ.

Found chiefly in the south of Europe, and north of Africa. Rare in North America.

The resinous balsamic Ladanum is procured from Cistus creticus.

Order XCII.—PAPAVERACEÆ (Poppy.)

Sepals two, deciduous. Petals four, or some multiple of four. Stamens sometimes in four parcels, usually indefinite. Fruit one-celled, pod-like, with two parietal placentas, or capsular with several placentæ. Seeds numerous, minute.

Herbaceous plants or shrubs, with milky juice.

Two-thirds of this order are European. The rest are found in North America, tropical ditto, China, Japan, &c.

The narcotic property of the Poppy is the prevalent character of the order.

Order XCIII.—NYMPHÆACEÆ (Waterlily.)

Sepals and petals indefinite, passing into each other, inserted on the disk, with petaloid filaments. Ovary many-celled, with spungy dissepiments, to which the seeds are attached.

Aquatics, with cordate or peltate, fleshy leaves.

Natives of the Northern hemisphere; very rare in the southern; not known in South America.

Order XCIV.—RANUNCULACEÆ (Crowfoot.)

Sepals three to six, deciduous. Corolla three to fifteen petals, regular or irregular. Stamens free, rarely definite. Carpels numerous, one-celled, on a torus, or united, and forming a many-celled ovary. Ovules one or two in each *cell or carpel, attached to the inner edge. Fruit either dry akenia, or baccate, with one or more seeds, or follicular, with one or two valves.*

Herbs; rarely shrubs.

The largest portion of this order is found in Europe, North America, India, and New Holland. Rare in Africa, except on the shores of the Mediterranean.

Their properties are caustic, acrid, and poisonous.

Order XCV.—BERBERACEÆ (Berberry.)

Sepals three, four, to six, deciduous. Petals equal in number to the sepals, or double. Stamens of the same number as the petals. Ovary one-celled. Fruit baccate or capsular. Seeds one, two, or three, attached to the bottom of the cell.

Shrubs and herbs, with alternate compound leaves.

In mountainous regions in the Northern hemisphere, and in South America.

Order XCVI.—ROSACEÆ (Rose.)

Calyx four to five-lobed. Petals five. Stamens free, arising from the calyx, incurved in æstivation. Ovaries solitary or several, one-celled, sometimes adherent. Ovules two or more, pendulous. Fruit one-seeded nuts, or pomaceous, or drupaceous, or acini, or follicles, with several seeds.

Shrubs and herbs. Leaves alternate, usually with two stipules at their base.

Natives of temperate and cold climates.

Sub-Orders.

1. AMYGDALINEÆ (Almond.)

Ovary one-celled, with two suspended ovules. Fruit a drupe. Seed large, inclosed in a brittle testa, sometimes separating from the sarcocarp (fleshy part of the fruit). Leaves simple, alternate.

Trees or shrubs.

Natives of the Northern hemisphere, in cold and temperate climates.

2. PYRINEÆ (POMEÆ, *Lind.*) (Apple.)

Fruit pomaceous (apple). One to five-celled; the cells are one-seeded, lined with a bony or cartilaginous substance (endocarp).

Trees, with alternate stipulate leaves. Natives of Europe, North Asia, and North America. Rare in other parts.

3. ROSINEÆ (Rose).

Calyx five-lobed. Petals five. Calyx fleshy, urceolate. Ovaries several, inclosed in the calyx. Single-seeded.

4. POTENTILLINEÆ (Cinquefoil.)

Pericarps conglomerated on a torus, either dry or juicy.

5. SANGUISORBINEÆ (Burnet.)

Calyx tubular. Limb three, four, or five-lobed. Petals deficient. Stamens definite, free. Ovary single, with a single ovule. Fruit a one-seeded nut, enclosed in the calyx.

Herbaceous plants, with alternate, stipulate leaves.

Hypericaceæ may be known from the other orders of this sub-section by the numerous stamens united in three or more parcels (polydelphous). The Mallow tribe is known by having the stamens all connected by a web towards their base (monodelphous), and by the numerous carpels disposed round the centre (axis)—Br. species. Tiliaceæ are an order known in this country by their arboreous habit. Cistinaceæ by the shrubby habit, deciduous petals, and persistent sepals. Papaveraceæ by the discpalous, caducous calyx, and by the milky juice. Nymphea-

ACEÆ by their localities (aquatic). RANUNCULACEÆ by their usually indefinite styles, and by their fruit, which is either a number of dry akenia, one or two-seeded, collected round a torus, or follicle, or rarely baccate. BERBERACEÆ have definite stamens.

The sub-orders of ROSACEÆ, viz. AMYGDALINEÆ and PYRINEÆ, are distinguished from other orders and from each other by their fruit. ROSINEÆ by the urceolate, fleshy calyx. POTENTILLINEÆ agree with RANUNCULACEÆ (RANUNCALINEÆ) in fruit, differ in the persisting calyx and in the perigynous stamens. The sub-order SANGUISORBINEÆ is easily known from all the Rosaceous sub-orders by the absence of petals. It may be known from all the apetalous genera, of the petalous orders, by the single ovule and the one-seeded nut inclosed in the calyx. It is distinct from the apetalous orders AMARANTACEÆ and CHENOPODIACEÆ by stipulate leaves, and from POLYGONACEÆ in having free, not ochreous (booted) petioles. From URTICACEÆ it may be known by having less rough, and usually compound or plaited leaves.

The order ELATINACEÆ is distinguished from the orders of this sub-section by its definite free stamens.

SECTION B.—Corolla polypetalous; ovary inferior.

Order XCVII.—UMBELLIFERÆ (APIACEÆ, *Lind.*)

Calyx minute, sometimes a rim round the apex of the fruit, sometimes toothed. Petals five. Stamens five, with incurved æstivation. Ovary two-celled, with solitary, pendulous ovules, crowned by a disk. Fruit, two carpels adhering to a central axis.

Herbaceous plants, with fistular stems, and sheathing leaves. Found in woods, waste places, fields, and marshes, in the northern parts of the Northern hemisphere.

The seeds are aromatic and warm. The stem, leaves, and root, are often poisonous.

Order XCVIII.—ARALIACEÆ (IVY.)

Calyx as in Umbelliferæ. Petals five to ten. Stamens equal to the petals, or twice as many. Ovary with more than two cells, containing solitary pendulous ovules. Fruit succulent or dry, of several one-seeded cells.

Trees, shrubs, or herbs.

Natives of the eastern parts of the world, also of North and tropical America.

Order XCIX.—GROSSULACEÆ (GOOSEBERRY.)

Calyx four to five-parted. Petals five, minute, inserted in the throat of the calyx. Stamens five, alternating with the petals. Ovary one-celled, with two opposite parietal placentæ. Ovules many. Fruit a berry, with many seeds suspended in the pulp by filiform cords, crowned with the withered flower.

Shrubs, with alternate leaves and plaited vernation.

Natives of mountains, woods, and hedges, of temperate parts of Europe, Asia, and America. Unknown elsewhere.

Order C.—ONAGRACEÆ, *Lind.* (EVENING PRIMROSE.)

Calyx monosepalous, tubular. Limb four-cleft. Petals four, with twisted æstivation. Stamens four to eight, borne by the calyx. Ovary of four cells, many-seeded.

Herbaceous plants or shrubs; with baccate or capsular, many-seeded fruit. Most abundant in North America and Europe. A considerable number grow in India and at the Cape.

The following are by Dr. Lindley reckoned sub-orders of this family:—

1. HALORAGINEÆ. (HALORAGEÆ, *Lind.*)

Calyx minute. Petals minute, borne on the calyx, sometimes deficient. Stamens inserted on the calyx, and equal (usually) in number to the petals. Ovary one or several-celled, adhering to the calyx, with pendulous ovules.

Mostly herbaceous.

Marshes, ditches, and ponds, or rivers, in Europe, or North America, Cape, New Holland, &c., are the native places of this order.

2. *CIRCINEÆ* (*CIRCEÆ*, *Lind.*) (ENCHANTER'S NIGHT SHADE.)

Calyx two-parted. Petals two. Stamens two. Ovary two-celled, with a single erect ovule in each. Fruit two-celled, two-valved.

Herbaceous plants, with opposite, petiolated leaves.

Woods in the northern parts of the world.

The Umbelliferous tribe is known by the florescence and fruit. The Ivy (Araliaceæ) distinguished from Umbellate plants by habit, frutescent and climbing. The baccate fruited ONAGRACEÆ are distinguished from GROSSULACEÆ by the tetrapetalous corolla. Four to eight stamens, and fewer ovules. HALORAGINEÆ differ from ONAGRACEÆ in habit, and in the deficiency or minuteness of the petals.

The facility of referring a plant to its proper species, genus, and order, by means of any approximation to a natural arrangement, will appear from the following facts respecting the species usually referred to British plants.

Of the first class, Filices and their allies, forty species will be recognized as ferns by the most unpractised observer. The kindred families are four, and they comprehend the remaining twenty plants of this class.

In the second class (MONOCOTYLEDONS), 324 species are comprised under six orders, viz., Grass, Sedge, Rush, Liliaceous plants, the Orchis tribes, and Pond-weeds. The individual species belonging to each, and all of these orders can be ascertained with great facility. The remaining nine orders of this class contain but 35 species.

In the third class (DICOTYLEDONS), 516 are found in eight orders; and the marks of each of these orders are so obvious and constant, that any individual species of these 516 can with certainty be referred to its proper order by the merest tyro.

Again, about 400 belong to 15 orders, which can be easily made out by the constancy of these ordinal characteristics. All the other orders do not comprehend above 200 species.

Hence it is plain, that 840 plants may be more certainly and readily classified under their proper families, by these external marks alone, than if referred to the Linnæan classes.

By studying the essential characters of 15 orders, the natural families of 400 additional species may be acquired.

Besides the facility of naming and classifying our natural productions, this method will give even the mere student of names and classification, a power of recognizing the exotic species, of which hundreds are annually introduced. There are probably above 20,000 species belonging to the 15 orders which are known by external characteristics, and there are at least 10,000 belonging to the other 15 orders. These 30 orders contain more than four-fifths of the British plants, and rather more than one-half of the species known to exist in all quarters.

INDEX TO THE NATURAL ORDER,

WITH THE

Number of British Species and the Number of Known Species belonging to each.

	Br.	Kn.	Page
Aceraceæ	2	32	63
Æsculaceæ	0	9	63
Alismaceæ	3	26	41
Amarantaceæ	1	—	47
Amaryllaceæ	2	280	42
Amentaceæ	78	550	45
Apocynaceæ	2	197	54
Aquifoliaceæ	1	73	55
Araliaceæ	1	—	73
Aristolochaceæ	2	74	48
Asphodelineæ	18	400	41
Balsamaceæ	1	41	66
Berberaceæ	1	45	71
Boraginaceæ	24	428	53
Butomaceæ	1	4	41
Campanulaceæ	13	479	
Caprifoliaceæ	10	157	
Caryophyllaceæ Silenaceæ Alsinaceæ	60	567	6
Celastraceæ	1	41	6
Chenopodiaceæ	28	340	4
Cheratophyllaceæ	2	2	4
Circineæ	2	2	7
Cistinaceæ	5	161	7
Compositæ	132	5000	5
Coniferaceæ	4	120	4
Convolvulaceæ	5	428	5

	Br.	Kn.	Page
rassulaceæ	16	200	65
ruciferaceæ	72	1000	62
ucurbitaceæ	1	121	60
uscutaceæ	—	—	55
yperaceæ	97	1000	39
Dioscoreaceæ	1	62	42
ipsaceæ	6	102	58
	3	45	62
latinaceæ	2	4	69
Elæagnaceæ	1	15	49
Equisetaceæ	8	—	37
Ericaceæ	13	700	56
Euphorbiaceæ	16	600	47
Filices	60	1500	35
rankeniaceæ	2	18	63
Fumariaceæ	6	69	68
Gentianaceæ	15	206	54
Geraniaceæ	16	490	67
Graminaceæ	115	2000	40
Grossulaceæ	6	53	74
Haloragineæ	5	43	74
Hydrocharaceæ	2	5	43
Hypericaceæ	11	140	68
Illecebraceæ	2	63	61
Iridaceæ	7	275	42
Juncaceæ	34	150	40
Juncaginaceæ	2	7	38
Labiatæ	55	578	52
Leguminosæ	70	2064	68

	Br.	Kn.	Page
Lentibulaceæ	6	78	51
Liliaceæ	30	610	41
Linaceæ	5	55	67
Lobeliaceæ	—	—	57
Loranthaceæ	1	327	59
Lycopodiaceæ	6	—	36
Lythraceæ	3	78	60
Malvaceæ	6	212	69
Marsiliaceæ	2	—	36
Monotropaceæ	1	4	56
Myricineæ	1	21	45
Nayasaceæ	18	—	38
Nymphæaceæ	3	41	70
Oleaceæ	2	106	52
Onagraceæ	11	152	74
Orchidaceæ	34	750	43
Orobanchaceæ	7	34	51
Oxalaceæ	2	159	67
Papaveraceæ	11	76	70
Pistiaceæ	4	7	38
Plantaginaceæ	5	197	50
Plumbaginaceæ	4	168	51
Polemoniaceæ	1	67	55
Polygalaceæ	1	271	67
Polygonaceæ	23	200	48
Portulaceæ	1	60	61
Primulaceæ	19	140	54
Pyrolaceæ	5	16	56
Ranunculaceæ	36	568	70
Resedaceæ	3	85	62
Restiaceæ	1	60	40
Rhamnaceæ	2	120	64
Rosaceæ	74	900	71
Santalaceæ	1	70	49
Saxifraginaceæ	30	207	65
Scrophularaceæ	45	750	51
Smilacineæ	7	140	41
Solanaceæ	12	541	53
Staphyllaceæ	1	8	64
Stellatæ	21	252	59
Tamaricaceæ	1	23	61
Thymeliaceæ	2	123	49
Tiliaceæ	3	73	69
Typhaceæ	6	110	39
Umbelliferæ	65	641	73
Ulmaceæ	5	—	46
Urticaceæ	5	336	46
Vaccinaceæ	3	173	57
Valerianaceæ	2	140	58
Verbenaceæ	1	300	52
Violaceæ	9	178	63

N. B.—The numbers of Known Species are considerably understated, being for the most part taken from a work published upwards of ten years ago.

The number assigned to the Order, includes such as belong to the Sub-orders; viz, the number opposite Rosaceæ comprehends the species belonging to Amygdalineæ, Potentillineæ, Spiræneæ, &c.

DESCRIPTIVE BOTANY, GENERA AND SPECIES.

Class I.—CELLULARS.

Chiefly composed of cellular tissue; flowerless, *i. e.* having neither stamens nor styles, nor proper seed vessels, nor seeds.

Order I.—FI'LICES.

Fructification either in terminal spikes; or on the back of the fronds (leaves), or sitting on the root.

FI'LICES VE'RÆ, or TRUE FERNS.—Fructification on the back of the fronds (leaves), which are circinate (coiled like a flat spiral spring) in vernation.

POLYPO'DIUM.—Fructification (sori) without an indusium, in little round masses scattered over the frond.

P. *vulgáre.*—Fronds pinnatifid. Segments linear and alternate.

On trees, walls, &c., common. Mr. Francis, in his excellent work on ferns, describes four varieties, viz.:—

β (*serrátum*) Lobes distinctly and often doubly serrated. About Albury and Shere.

γ (*prolíferum*) Lobes proliferous or else cloven at the end.

δ (*cámbricum*) Leaves ovate (oval), deeply cleft on the sides.

ε (*acútum*) Lobes and fronds long, terminating in a sharp point.

P. *dryópteris?*—Frond ternate, bipinnate, spreading, deflexed with a filiform root.

Scotton Common, Lincolnshire.

P. *calcáreum.*—More rigid, more erect, smaller pinnæ and thicker root than P. *dryópteris.*

Derbyshire, not rare. On the Moor between Matlock and Wirksworth.

ASPI'DIUM.—Fructification disposed as in *Polypódium,* with an indusium attached by its centre.

A. *dilatátum.*—Frond bipinnate. Pinnæ branching, pinnulæ pinnatifid, with serrated, somewhat prickly segments.

Moist places. Variety with reflexed segments common about Hampstead.

A. *spinulósum ?*—Rach smoothish or with few scales. . Scarcely bipinnate. Pinnulæ decurrent, with longish prickles.

It has the appearance of *dilatátum,* but is not nearly so large nor so much divided.

In bogs about Hurtwood Common, Albury, Shere, &c., Surrey.

A. *fílix fœ'mina.*—Frond narrower than *dilatátum.* Segments of the pinnulæ narrow, regularly serrated, not prickly.

Moist places in woods and ditches.

Var. With a reddish frond in bogs about Albury, &c.

Var. *irríguum.*—Slenderer, with a smooth pellucid four-angled rach. Frond pinnated, pinnæ pinnatifid, with lateral fructification.

Bogs about Shere, Ewhurst, &c. Ladyfern is usually described in the following genus; in habit it agrees with the *Aspidia.*

A. *fílix mas.*—Frond pinnated. Pinnæ pinnated or pinnatifid. Segments serrated or crenated, without awns or bristles.

In hedges and ditches.

Mr. Francis records three varieties of *fílix mas*, viz :—

β (*variegátum*) White-tipped and edged with green.

γ (*recúrvum*) Pinnæ crisped turned down. Frond small, rach smooth.

δ (*spinósum*) Pinnules serrated, smaller, blended together with larger auricles.

A. *thely'pteris.*—Frond pinnated, with linear lanceolate segments. It is known from *oreópteris* by its smaller size, lighter colour, frond not so much contracted below, and especially by its creeping, not fascicled root.

It is abundant in Holme Fen, Hunts. Waterdown Forest, Tunbridge Wells—Mr. William Pamplin. Wimbledon Common, in a valley below Cæsar's camp—Mr. Francis.

A. *oreópteris*—Distinguished from small plants of F. *mas*, by the entire margin of the segments, by its smooth stipe (stem) and rach, by the lower pinnæ bent downwards, and by the black marginal fructification.

On Hampstead Heath near the great bog. About Leith Hill, Surrey. Hurtwood Common, and many other parts of this district, abundantly.

A. *aculeátum.*—Frond bipinnate, rigid, shining. Pinnulæ elliptic, serrated, each tooth ending in a prickle. The pinnulæ have each a large tooth or lobe at the base on the upper side.

Under hedges, about fields and lanes, &c. Near Hendon, Eltham, Epping Forrest, &c.

Var. *anguláre.*—In this variety the rach is very chaffy (scaly), and the frond is usually more divided and not so rigid as the common form.

Mr. Francis describes two other varieties of this plant, viz. :—

β (*lonchitidoídes*) Pinnules combined, forming nearly a pinnate frond.

δ (*lineáris*) Pinnules linear and very sharp pointed.

A. *lobátum* differs from *aculeátum* in its narrower, closer, and rather more rigid, gláucous frond; not so scaly, with a smaller tooth, auricle or lobe, and a larger upper pinnule at the base of the pinnæ.

Not rare in Epping Forest, and perhaps Hainault Forest.

A. *cristátum*.—Frond pinnated. Pinnæ opposite, pinnatifid, oblong, obtuse, distant.

The author saw a plant from Holme Fen, or its neighbourhood, cultivated by Mr. Henderson, at Milton Hall, Earl Fitzwilliam's.

Mr. Francis records Wimbledon Common, near Cæsar's camp, as one of its localities.

It is one of the rarest of British ferns.

CISTO'PTERIS.—Indusium attached by its base to the under-side of the sori. Generally distinct from *Aspidium*, by this character.

C. *frágilis*.—Frond bipinnate, pinnæ oval-lanceolate, pinnules pinnatifid, with oval or lanceolate segments. Rach winged.

Wall opposite Weston House, Albury, viz., the low wall on the left of the road between Weston-street and Albury Park—J. S. Mill, Esq., in Hooker's British Flora.

C. *alpína*.—Frond bipinnate. Segments linear, short, obtuse, with two to three blunt erect teeth.

On a wall (since destroyed) at Low Layton, Essex.

Rediscovered in 1835, by Mr. William Pamplin, an indefatigable and successful investigator of ancient localities.

ASPLE'NIUM.—Fructification linear (in lines). Indusium simple, opening towards the rib.

A. *trichománes*.—Frond simply pinnated, with roundish leaflets. Nine to twelve inches high.

Hampstead Heath, in the paling beside the clump of firs near the Spaniards; lanes about Shere, not uncommon.

A. *rúta muraria*.—Frond bipinnated at the lower part. Pinnæ alternate, branching. Segments cuneate (wedge-shaped), toothed. Three to five inches high.

Finchley Church, Albury, and Shere; not rare on old walls. Groombridge, Kent, with A. *trichománes*. On the ruins of Brambletye House, Sussex, there is a variety nearly twice the size of the common form, of a lighter green, with the lower pair of pinnæ ternate, the upper simple. Pinnulæ and upper pinnæ more elongated, far more distant, and on a slenderer rach.

I have a somewhat intermediate variety from Mr. Pamplin, gathered at Brasted, with the pinnules rather elongated.

A. *adiántum nígrum*.—Frond bipinnated, branching. Stipe glabrous, angular. Pinnæ pinnated and pinnatifid. Lower segments incised (cut in) and serrated. Upper only serrated.

Hendon and Bacher Heath, Middlesex; woods and lanes, Albury, Shere, &c., plentiful.

I have seen a variety of this plant gathered in one of the lanes of Albury, with a frond twice the length of the common state, lanceolate, not triangular; the pinnæ have the same character of length and shape. It differs also in being much more open, in having the pinnæ more upright, on longer footstalks, and more divided, *i. e.* never confluent, as in the common sort. The teeth of the pinnules are smaller, and the whole of a lighter green.—Communicated by Miss Bayford, Albury.

A. *lanceolátum.*—Frond bipinnate. Pinnulæ cuneate at the base, with upright teeth. Smaller than A. *adiántum nigrum*, not so branchy at the base.

High rocks, Tunbridge Wells.

SCOLOPE'NDRIUM.—Fructification linear. Indusium double, one lip lying over the other.

S. *vulgáre.*—Frond entire, cordate (heart-shaped) at the base, narrow, smooth. One to two feet long.

On a wall at Hampstead, near the Castle; woods and lanes, Albury, &c.

BLE'CHNUM.—Fructification in parallel lines, continuous, one on each side of the segments of the frond.

B. *boreále.*—Barren fronds, narrow, pinnatifid, with entire segments. Fertile frond broader, with narrower segments.

Hampstead Heath, &c., Hurtwood, Shere, &c.

PTE'RIS.—Fructification linear, marginal, continuous. Indusium formed of the inflected margin of the frond.

P. *aquilina.*—Frond three-branched. Branches bipinnated. Larger pinnules pinnatifid. Rach smooth.

Common in parks, woods, &c.

HYMENOPHY'LLUM. — Fructification marginal, in a two-valved receptacle.

This genus is the type of the sub-order *Hymenophylleæ*, and of the order of filices, *Gleicheniaceæ*, of Dr. Lindley.

H. *Tunbridgénse.*—Frond membranous, about an inch long, pinnatifid. Segments lacineated. Stipe filiform.

High rocks, Tunbridge Wells, rare—Mr. Reid of Erridge. Erridge park, on rocks, rather scarce.

OSMU'NDA (Osmundáceæ.)—“Fructification in branchy spikes. Thecæ pedicelled, globular and striated.”

O. *regális.*—Frond bipinnated, with terminal spikes. Pinnules cordate and lanceolate, glabrous. One of the largest and most elegant of ferns. From two to six feet high.

Leith Hill, above Lonesome, and between Dorking and Cold Harbour, near the latter: and above Pislick or Peastwick, Shere, and on the other side of the hill near Ewhurst.

OPHIOGLO'SSUM (Ophioglossáceæ).—Fructification in a spike containing a double row of thecæ immersed in the substance of the frond.

O. *vulgáre.*—Root fibrous. Frond simple, entire, elliptic.

Bog between Waddon Mill and the Snuff Mill, Beddington; in wet parts of Albury Park; Waterdown Forest, Tunbridge Wells; Rockingham Forest, near King's Cliffe; Lincoln Fens, &c.

BOTRY'CHIUM.—Fructification a branchy spike. Thecæ attached, uncovered, (not immersed in the frond, like *Ophioglossum.*)

B. *lunária*.—Spike rising from the base of the pinnated frond. Pinnæ lunulate and crenate.

Like *Ophioglóssum* in size and habit, but a much rarer plant. The following localities are from Mr. William Pamplin: Shirley Common, near Croydon; near Dartford, Kent; Petersfield, Hants.

Order II.—LYCOPODIA'CEÆ.

Fructification sessile in the axils of the leaves, of two sorts. One two-celled containing very fine grains; the other three to four valved, containing three to five grains much larger than the preceding, and these are the true sporules.

LYCOPO'DIUM.—Thecæ (receptacle of the seeds) globular, one-celled, two, three, and four-valved, containing many minute sporules.

L. *clavátum*.—Frond very long, creeping and rooting. Branches ascending. Spikes in pairs (usually), on long peduncles.

Leith Hill, abundant.

L. *inundátum*.—Stem short, creeping. Branches erect, solitary, bearing solitary spikes.

Hampstead Heath; Addington Hills, &c.

The Hampstead locality is beside the pond on the Hendon side of the heath; for which information I am indebted to Golding Bird, Esq.

Order III.—MARSILEA'CEÆ.

Fructification attached to the root, or imbedded on the enlarged base of the leaves (fronds.)

PILULA'RIA.—Fructification (thecæ) free, indehiscent.

P. *globulífera*.—Stem filiform, rooting with filiform upright leaves.

St. Leonard's Forest, Sussex.—William Christy, Esq. Specimen and locality, communicated by Mr. William Pamplin.

Order IV.—EQUISETACEÆ.

Fructification in terminal spikes. Stipe or stem with sheathing joints and whorled branches.

EQUISE'TUM.—Character same as the Order.

E. *arvénse*.—Fertile stipes without branches, smooth six to seven inches high, with wide sheaths and a large spike. Barren stipes much taller and slenderer, with many long, simple, four-angled, rough branches, and small sheaths. Grows long after the fertile plants have disappeared.

E. *palústre*.—Stipe furrowed and angled, with simple five-angled branches.

Var. E. *palústre*.—Polystáchion, Ray. Lower branches extended beyond their usual size, and reaching nearly to the upper whorls, like a cymous inflorescence. Fruit appears on many, but not on all the branches.

Bog near Beddington, and other places where the tops of the stems have been mown, or bitten off before the plant was in flower.

E. *limósum.*—Stipe tall, slender and smooth, scarcely branched. Ament (spike) of the fructification large and blackish. Two to three feet high. Branches (if any) smooth.

About Hampstead and Battersea, Albury, &c., usually in water.

E. *fluviátile.*—Barren stem (stipe), tall, robust, with numerous whorled branches. Fertile stipe with very long sheaths, and a large blackish spike.

E. *fluviátile* does not grow in rivers as its name indicates, but on stiff clayey banks, as below Hampstead, on a bank of the new Finchley road; and in the wood between the Spaniards and Finchley; not in the great bog there, but on the rising ground close to it. E. *palústre* grows in boggy places, and E. *limósum* in rather deep water. E. *arvénse,* as its name implies, grows plentifully in most clayey, wettish, arable fields. E. *sylváticum,* the scarcest of all these, is found in woods, and in waste, moory marshy places.

E. *sylváticum.*—Branches compound, deflexed. A slender and very elegant plant.

Hampstead Heath, and in a wood below the Spaniards towards Finchley; also in the valley between the hills, half way from Pislick, Shere, going towards Ewhurst, and on the Ewhurst side, abundant.

CLASS II.—MONOCOTYLE'DONS.

LEAVES without prominent nerves. Seeds with one cotyledon (seed lobe) germinating with one seed-leaf.

DIVISION A.

Flowers either without a perianth, or with callous scaly lobes.

Order V.—PISTIA'CEÆ.

Fructification and flowers very inconspicuous, growing out of the margins of the small roundish floating fronds (leaves.)

LE'MNA.—Stamens two, fruit a one to five-seeded utricle.

L. *minor.*—Fronds roundish, almost flat, slightly convex below.

L. *polyrhíza.*—Twice the size of *minor.* Fronds purplish.

L. *trisúlca.*—Fronds elliptic, very thin, growing out of the edges of each other.

L. *gíbba.*—Fronds reticulate, hemispheric and pellucid below. The least common of the genus.

L. *minor* is the most common and earliest species, and is easily known from L. *polyrhiza* by its much smaller size and permanent green colour. From *gíbba* it is distinguished by its flat or slightly convex under-side. In this country they are very rarely met with in flower.

Order VI.—NAYASA'CEÆ—(FLUVIA'LES.)

Fruit one-celled, one-seeded. Leaves unctuous; veined and reticulated. Aquatic floating plants.

ZOSTE'RA.—"Monœcious. Stamens and pistils inserted in two rows upon one side of a spadix. Spathe foliaceous, anthers ovate, sessile, alternating with the germens (ovaries.)

Z. *marína.*—"Leaves somewhat three-nerved, linear, obtuse, sheathing. Stem roundish, of various length. Flowers green, in two rows, without any perianth."—Hooker, B. Flora.

Common on the coast.

RU'PPIA.—"Flowers two on a spadix arising from the sheathing bases of the leaves, which perform the office of a spathe. Drupes (fruit) four, pedicelled."

R. *marítima.*—"Flowers green, without any perianth. Leaves sheathing, linear-setaceous. At the time of flowering the spadix lengthens remarkably to the height of five or six inches or more, and becomes spirally twisted, so as to bring the blossoms to the surface of the water. When the ovules are fertilized, the plant is again submersed."

Dunchurch, Kent.—The Rev. G. E. Smith.

POTAMOGETON—Florescence spiked. Anthers sitting on a disk; alternate, with four callous lobes, which form a sort of perianth. Fruit four one-seeded nuts.

P. *nátans.*—Spike dense, an inch and a half long, on a strong cylindric axillary peduncle, contracting under the dense mass of greenish florets. Leaves oval, green, on long footstalks.

Var. P. *nátans.*—Leaves elliptic, cordate at the base, on short footstalks. Shining, veined, and slightly reticulated. Peduncles two or three inches slender, bent downwards or twisted, spike rather dense, about an inch long, bearing numerous, smooth, greenish, yellowish nuts. In a bog at the foot of Hurtwood Hill; Shere.

P. *heterophy'lla.*—Lower leaves elliptic, on long footstalks. Upper leaves cordate at the base, oval, with prominent ribs, and olive colour.

P. *lúcens!* or *rufescens?*—Leaves all elliptic, reddish on long stalks, alternate or opposite. Spike on a long peduncle.

Addington Hills. A variety of this or of *heterophy'lla* with some of the leaves broadly elliptic, lanceolate. Some on short petioles, and some on very long petioles, all sharp pointed, and with the veins branching from the midrib at the base, or from the base to one-third of the leaf upwards, finely reticulated. From Hurtwood, Shere.

The following varieties of P. *dénsa* and *críspa* were gathered at Hackbridge, Mitcham Common, and in a large pond near the church, Croydon, by the railway (Wandsworth and Merstham.) P. *dénsa*, var. Leaves longer, more distant, lanceolate, much acuminate and membranous. Stem round and dichotomous, like *dénsa*, but longer, flaccid, and not so thick nor so strong. Hackbridge.—P. *críspa,* var. Similar in habit and colour to the var. *dénsa,* but having alternate and much larger leaves, with a prominent midrib, and two inconspicuous veins on each side. Stem compressed, striated and slightly tortuous, with depressed joints. Leaves slightly undulated and serrulated. Like P. *serráta* or *serruláta* of Hudson.

P. *perfoliáta.*—Leaves all under water, heart-shaped, stem clasping, pellucid. Spikes few flowered.

Frensham Pond, Surrey. In the river Wey, Hants, not rare.

P. *críspa.*—Leaves opposite, lanceolate, waved and serrated.

P. *dénsa.*—Leaves oval pointed, opposite, upper crowded together. Spike lax.

P. *pusílla.*—Stem round, filiform, slenderer than *compréssa,* also leaves shorter and narrower. Peduncles lateral, three or four times as long as the spike which consists of two whorls nearly together.

P. *compréssa.*—Colour a lively green. Leaves sessile, alternate, linear, bluntly pointed, with a prominent midrib. Stems compressed, filiform, branchy.

Croydon canal.

P. *gramínea.*—Similar to P. *compréssa,* which Professor Hooker describes as a variety of P. *pusílla,** but considerably larger, with broad, linear, obtuse leaves. Peduncles not longer than the oblate spike.

Isle of Dogs. Dorking Mill Pond. River Wey in Hants. Ponds in Woolmer Forest. Not rare.

P. *pectináta.* — Leaves setaceous, with stem-clasping sheaths. Flowers in interrupted spikes, growing out of the axils of the branching stem. Seeds or nuts very large.

ZANNICHE'LLIA.—Monœcious. Perianth of one piece. Ovaries four or more.

Z. *palústris.*—Stem long, filiform, branched. Leaves linear and opposite. Flowers in the axils. Fertile floret pedicelled. Stamen and anther beside it.

Order VII.—JUNCAGINA'CEÆ.

Perianth inconspicuous, uncoloured. Stamens six. Ovaries three to six, cohering firmly. Ovules one to two. Flowers spicate or racemose. Leaves ensiform.

TRIGLO'CHIN.—Perianth of six pieces. Ovary dehiscent at the base, with three teeth. Florescence spicate.

T. *palústre.*—Ovary three-celled, linear. Leaves narrow, channelled.

Battersea Marshes. Croydon canal, &c.

T. *marítimum.*—Ovary six-celled, ovate shorter than in T. *palústre.* Leaves broader.

Essex marshes.

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* "I quite agree with Chamiso and Schlecktendal, who unite the P. *compréssus* with P. *pusillus.*"—Sir W. J. Hooker in Br. Flora.

Order VIII.—TYPHA'CEÆ.

Florescence a spadix, monœcious, except *Acorus*. Ovaries superior, one to three-celled. Fruit a berry, dry drupe or capsule.

TYPHA.—Spike long, cylindric, thick. Stamens three. Seeds pedicelled.

T. *latifólia*.—Leaves broad. Barren and fertile flowers, not separated.

T. *angustifólia*.—An intermediate space between the barren and fertile flowers. Leaves narrower than in the former species, concave.

Near the Warren, Epping Forest. Mitcham, &c.

SPARGA'NIUM.—Florescence in globular spikes. Fruit a one-seeded dry drupe. Perianth of three pieces.

S. *ramósum*.—Spikes on branching peduncles. Root-leaves concave.

S. *símplex*.—Upper spikes sitting on a common peduncle. Lower on separate peduncles. Root-leaves with flat sides. Not concave.

S. *nátans*.—Leaves flat, floating. Perianth greenish.

On Scotton Common, Lincolnshire. Uppermost of three ponds between St. George's Hill and the Wey. Ham ponds, Sandwich—The Rev. G. E. Smith, Plants of South Kent.

A'CORUS.—Perianth of six pieces. Spadix many-flowered.

A. *calámus*.—Spadix greenish. Leaves ensiform, aromatic and sweet smelling.

Ponds near Millhill and Totteridge, Herts. Thames above Hampton Court, plentiful. Putney Heath—Mr. William Pamplin.

A'RUM.—Spadix terminating in a smooth, club-shaped body, in a loose leafy spathe. Styles surrounding the base. Stamens above them, in several rows. Fruit, a cluster of red, watery, one-seeded berries.

A. *maculátum*.—Spadix purplish. Leaves usually spotted. A very acrid plant.

Common under hedges, in lanes and meadows in the south. Rare in the north.

With the exception of *Arum maculátum* all the species in this group of orders, are either aquatic or marsh plants.

DIVISION B.

GLUMA'CEÆ.

Perianth composed of from one to four glumes.

Order IX.—CYPERA'CEÆ.

Perianth of one glume. Ovary with one erect ovule. Stem solid or spongy. Sheath of the leaves (if any) entire.

CYPE'RUS.—"Spiklets in two rows, many-flowered. Glume keeled. Style deciduous.

C. *lóngus*.—"Spiklets linear, lanceolate, erect, spreading, in compound umbels. Involucre long, leafy. Involucel small. Stem triangular.

Sea Brook, Kent—Rev. G. E. Smith." Hooker's Flora.

• C. *fúscus*.—"Culm a few inches high. Spiklets corymbous, linear, lanceolate, with spreading glumes. Bracts two to three, unequal, leafy."

In a bog, Little Chelsea, discovered by the late A. Haworth, Esq. Specimens sent to the author, by Mr. William Pamplin, who gathered it in the same place, 1837.

No. of sp. ex Sprengel, 300.

SCHŒ'NUS.—"Spiklets in two rows, one to three-flowered. Style deciduous.

S. *nígricans*—"Spiklets collected into a rounded head, shorter than the bracts. Stem round."

Scotton Heath, Lincolnshire. Bagshot Heath—Dickson. Near Folkestone, Kent, plenty—Mr. William Pamplin.

RHYNCHO'SPORA.—Spiklets imbricated on all sides, few flowered. Bristles underneath the ovary. Style spreading at the base, subulate, bifid, persistent.

R. *álba*.—Spiklets as long as the bracts, corymbous. Leaves linear, narrow. Easily distinguished by its whitish flowers.

Walton Common. Ashdown Forest, Sussex.

ELEOCHA'RIS.—Style dilated at the base and united to the ovary by a contracted joint. Glumes imbricated in all directions. Bristles or hairs under the ovary.

E. *palústris*.—Culm round and tapering, sheathed at the base, twelve to eighteen inches high. Spike solitary, terminating, ovate. Glumes lanceolate. Stigmas two.

E. *multicáulis*.—Culm shorter, smaller, and more solid than *palústris*. Style more dilated at the joint. Root not creeping as in *palústris*. The culm of E. *palústris* has no pith, and when gathered soon becomes flaccid. E. *multicáulis* has the culm filled with pith. They are frequently found growing together.

E. *cæspitósa*.—Culm round or slightly compressed, rigid. Sheaths with subulate leaves. Spikes very small, few-flowered.

Bog at the foot of Addington Hills, near Combe Lane; Leith Hill, &c., not rare.

E. *aciculáris*.—Culm setaceous, compressed, channelled. Spike ovate, acute. Sheaths leafless.

Circular Pond, Wansford Park, south side.

BLY'SMUS.—"Spike compound, compressed. Spiklets bracteated, in two rows. Glumes imbricated on all sides. Fruit compressed. Style persisting.

B. *comprèssus*.—"Leaves flat. Bracts subulate, leafy. Bristles six, as long as the style."

Thames below Woolwich; Colne below Colchester, not rare.

ISOLE'PIS (Lind.)—Spikes imbricated in all directions. Style not deciduous, nor jointed, as in *Eleochária.*

I. *flúitans.*—Culm angled and branched, leafy, floating. Spikes terminal, solitary.

Wandsworth Common. Finchley Common, &c.

I. *setácea.* (Scírpus setáceus—Hooker.)—Culm tapering, with very slender lateral spikes, usually two together.

Leith Hill, Surrey; Ashdown Forest, Sussex; Hampstead Heath, by the Ponds; Mitcham Common.

CLA'DIUM.—Outer glumes barren; fruit, a nut with a loose external coat, without bristles at the base.

C. *maríscus.*—Panicle much divided, leafy spiklets, capitate, conglomerate. Stem leafy. Margins of the leaves and keel rough.

Bogs and fens in Norfolk, Cambridge; between Sandwich and Deal, one mile and a-half from the former, below the Chalk Pit—Rev. G. E. Smith.

SCI'RPUS.—Like *Isolépis,* but with bristles under the ovary. Styles not jointed

S. *lacústris.*—Culm cylindric, six to nine feet high. Florescence a cluster of lateral, almost terminal spiklets.

S. *triquéter.*—Stem three-angled, acute, with leafy sheaths.

Thames, below Battersea.

S. *carinátus.*—Sheaths leafless. Stems round at the base, obtusely three-angled upwards.

Thames, with S. *triquéter.*

The florescence of *lacústris* and *triquéter,* is lateral; in *carinátus,* terminal. In other respects the florescence is similar.

S. *marítimus*—Culm leafy, triangular. Spiklets clustered terminal. Involucre leafy. Glumes notched.

Below Greenwich, not rare.

S. *sylváticus.*—Culm leafy, triangular. Florescence cymous, compounded, terminal. Glume entire, acute. Involucre leafy.

Hampstead Wood, below the Spaniards.

Bogs, Albury, Shere, and Wotton, not rare.

Sprengel describes 126 species of this genus.

ERIO'PHORUM.—Seeds beset with long and thick wool.

E. *angustifólium.*—Leaves flat and narrow. Culm three-cornered at the top.

Hampstead Heath, &c.

E. *polystáchion.*—Twice or thrice as large as *angustifólium.* Leaves broad and keeled.

Bogs about Leith Hill, &c.

E. *vaginátum.*—Culm as large, or larger than *polystáchion.* Spike solitary.

Addington Hills.

CAREX.—Monœcious.—Barren flowers, with three stamens. Fertile flowers consisting of a style with two to three stigmas. Fruit, a single triquetrous seed, in a pouch.

* Barren and fertile flowers on the same spike.

† Spike simple, *i. e.* one spike only on the culm.

C. *pulicáris.*—Florets few. Fruit spreading, acuminate. Heigh from nine to twelve inches.
Addington Hills. Bog, Hampstead Heath.

C. *dioica.* Diœcious.—Fruit ascending, nearly upright. Rough at the margin. Scarcely half the height of the former, more leafy. Leaves strongly keeled, even to the base. In *pulicaris* they are almost flat at the base.

†† Spike compound, *i. e.* branched. Spiklets remote.

C. *stelluláta.*—Spiklets three or four. Fruit divergent. Culm slender, leafy at the root. Six to twelve inches.
Commons and waste places.

C. *remóta.*—Spiklets tapering, three lower remote, three upper crowded. Bracts longer than the weak and slender culm.
Under hedges, &c.

C. *curta*—Spiklets ovate, tapering, three to four; without any bracts, not remote nor clustered, neat, whitish. Leaves numerous, exceeding the smooth and slender culm, which is from nine to twelve inches high.
Wet places about Albury.

C. *arenária.*—Culm three-angled, rough, slender, leafy at the base with a far spreading root. Spiklets sessile, and congestate.
Common on the coast.

††† Spike compound, spiklets clustered.

C. *ovális.*—Spiklets about six, ovate, tapering and sitting. Culm angular and striated. Ten to fifteen inches high.
Bogs and woods about Hampstead and Highgate; Leith Hill, &c.

C. *intermédia.*—Spiklets ovate. Lower and terminal florets fertile, middle barren.
Woods, Hampstead.

C. *divísa.*—Differs from *intermédia* in its more branching spike, and in having the fruit more generally diffused, *i. e.* the barren florets not in the middle.
Essex coast.

†††† Spikes decompound, *i. e.* branches branched.

C. *muricáta.*—Spike oblong, somewhat square, green. Spiklets roundish. Fruit divergent, bifid. Culm strong, three-angled.
About ponds, ditch-banks, &c.
β Spiklets simple, forming a roundish head, small.

C. *divúlsa.*—Lower spiklets distant, rarely branched or in pairs. Upper ovate, close or crowded, each suspended by a concave, membranous bract with a long, tapering, rough, green, awn-like point. Bract almost wanting in some specimens. Culm slender, very leafy at the base, and from a foot to a foot and a half high.
Woods, Albury; Sherborn ponds, ditto.

C. *vulpína.*—Spike longer and denser than *divúlsa.* Spiklets sitting, compound, bearing clusters of large, divergent, acuminate fruit, with long serrated beaks. Roots cæspitose.
About ponds, &c.

C. *teretiúscula.—Spiklets crowded, spreading. Fruit diverging. Glumes broad, tawny with a whitish margin.*
Essex coast.

C. *paniculáta.*—Spike long, interrupted or lax, panicled and pendulous. Leaves keeled, concave. Edges of the acutely three-cornered stems, as well as the leaves, very rough. The roots of this sedge form large tufts, or hillocks, from one to two feet high.
Very common in bogs about Albury and Shere, Surrey; and about Lexden, near Colchester, Essex.

† * Barren and fertile flowers on separate spikes.

† Leaves sheathing. One spike, barren, rarely two.

C. *péndula.*—Fertile spikes cylindric, long and drooping, from three to four feet high.
Woods, Hampstead, Hendon, Highgate.

C. *strigósa*?—Culm tall, slender, three-angled, blunt, quite smooth. Leaves triangular, smooth and shining below, roughish upwards, pointed. Sheaths one to two inches. Peduncles about the same length. Spikes distant, lax. Fruit smooth, three-angled, pointed.
In a boggy wood between Peslick and Ewhurst, Surrey. "Black Notley, Essex—Ray." Walton, and Weybridge common.

C. *sylvática.*—Spikes slender, filiform, nearly erect. Fruit glabrous with a long beak. Scarcely half as long as C. *péndula.*
Woods. Common.

C. *fláva.*—Fertile spikes ovate. Bracts very long. Beak long, incurved, somewhat bifid.
Woods.

C *palléscens.*—Fertile spikes usually two, lower on a very long peduncle, upper on a short one. Sheath short. Fruit inflated, pale green. Glumes striped. Culm leafy, nine to twelve inches. Lower part hairy, with long sheaths.
Woods and moist places. Bog above Peslick, Shere, &c.

C. *binérvis.*—Spiklets ovate, acuminate. Lower fertile spiklet distant, upper crowded. Bracts longer than the culm.

C. *distans.*—Lower spiklet very remote, almost at the root, two upper together; smaller plant than *binérvis*, and the spiklets farther apart.

C. *recúrva.*—Fertile spikes cylindric, on long slender peduncles, usually two barren, and two fertile. Culm about a foot high. Bracts exceeding it.
Heaths and Bogs.

Var? C. *recúrva.*—Culm more triangular and rough at the top, less leafy. Fertile spikes two, barren three. Fruit blunter and more hairy.— Sherburn ponds, Albury.

C. *micheliána* ? Flor. Brit.

Var ? C. *recúrva* ? Upper fertile spikes compound.

Var ? A slender culm, fruit not rough.

These varieties grow about Sherburn ponds, Albury.

C. *panicéa.*—Bracts shorter than the pedicels of the two fertile spikes. Barren florets in one spike. Scale of the fruit brown, with a whitish margin and green rib. Fruit ribbed, inflated, beakless, longer than the scale. Smaller than *recúrva.*

Wet places.

C. *praécox.*—Fertile spikes two, ovate, flattish. Fruit large, downy, green or brownish. Beak, short and blunt. Glumes black, with a green stripe. Barren spike clavate. Culm four to six inches.

On heaths, downs, &c., one of the earlier species.

C. *fúlva.*—Spiklets upright, ovate, cylindric. Peduncles a little longer than the sheaths. Fruit beaked. Approaches near to *fláva.*

C. *Pseúdo-cypérus.*—Lowermost bracts slightly sheathed ; sheaths wanting in the others. Spikes cylindric, pendulous on long peduncles. Fruit oblong, acuminate, striated, cleft.

By a pond in a wood between Muswell Hill and Highgate. Hurtwood beyond Green lane, near Albury. Wotton. Near the Croydon canal—T. Ralph, Esq. Essex, not far from the ford of Mersea island.

† † Sheaths none, or very short.

C. *pilulífera.*—Fertile spiklets about three, roundish, crowded. Fruit diverging, globular, beaked and hairy. Culm weak, four to eight inches high.

C. *Oedéri.*—Culm leafy, two to four inches. Fertile spiklets roundish. Fruit large, divergent with a straight beak. Husk (glume) green, nearly as long as the fruit.

C. *cæspitósa* —Fertile spiklets sitting, cylindric, with long, dark green, auricled bracts. Barren and fertile spiklets two each. Scales much smaller than the flattish, green, smooth, ribbed fruit. Beak short, cylindric.

Spec. from Addington Hills, a foot high, spiklets three fertile and one barren. Bracts very slightly auricled.

Var. C. *stricta* ? Double the size of *cæspitósa*. Spikes two inches, rather pendulous. Bracts slightly auricled. Rather earlier.

Sir W. J. Hooker distinguishes it from *cæspitósa* by its tufted fibrous root, and by the acutely angular and taller stem.

Var. C. *cæspitósa* ? Digynous. Fertile spiklets two, sessile. Glumes black, with a green stripe, mucronate, nearly as large as the roundish mucronate fruit. Stem incurved, rough, three to four inches. Addington Hills.

† † † Barren spikes several, sheathless, except C. *hirta.*

C. *acúta.*—Spikes slenderer than in *paludósa.* Leaves narrower. A smaller species than C. *paludósa.* Stigmas two. Seed obovate. From one to two feet high. Leaves and stem very rough; lower side of the leaves glaucous, upper shining. Barren and fertile spiklets, two; the latter filiform, distant; the upper nearly sessile; the lower on a long peduncle.

In marshy places.

C. *riparia.*—Barren spikes three to five, crowded, triangular. Fertile, cylindric, thick.

Banks of rivers.

C. *paludósa.*—Lower fertile spikes large, abrupt, pedunculate, upper almost sessile. Fruit large, swollen, bifurcate, larger than the lanceolate scales. Culm and leaves very rough, deep green.

In ponds and rivers.

C. *hirta.*—Sheaths woolly. Barren spikes two to three. Fertile two to three. Fruit large, hairy, with a cloven beak.

In watery places the herbage of this species is smooth and shining. In dry places rougher and stunted. It varies from two inches to two feet high.

The known species of *Cárex*, according to Sprengel, are about 300.

Order X.—GRAMINA'CEÆ—(Gramineæ.)

Florescence panicled, spicate or spiked. Glumes two to four. Culm hollow, cylindric, jointed. Lower part of the leaf clasping the culm like a sheath, but not a true sheath, as in the order Cyperaceæ.

* Panicle open. Florets single.

AGRO'STIS.—Outer glumes two, equal or nearly equal, larger than the inner.

A. *setácea?*—Outer glumes unequal, much larger than the inner. Inner glumes two, hairy, with an awn from the base of each; one of the awns much longer than the other, and bent. Distinguished from the other grasses of this genus by the double awn and hairy inner glumes.

Beyond Peslick, Shere; between the hills. Not common.

A. *canína.*—Inner glume with an awn double its own length. Outer glumes nearly equal and reddish. Panicle erect. Branches simple and forked. Differs from *vulgáris* in its more upright simple panicle, and in the outer scale having a rougher rib or keel, and in usually having only a single inner glume.

A. *vulgáris.*—Panicle spreading, purplish. Inner glumes shorter than the outer, unequal.

A. *álba*?—Culm tall, rough at the top. Rach and branches ve rough. Panicle verticilled with trifurcate branchlets. Inn glume furnished with an awn as long as itself.

Woods.

A. *spíca vénti.*—Known from the other species by its annu duration, its verticilled (whorled) inflorescence, and by i long silky awns.

Cornfields about Ham and Teddington. Between Tottenha and the river Lea. Field between Ockham and the Hu Surrey. Southampton Railway, near the Wey.

Sprengel enumerates and describes 110 Agrostides, species Agrostis.

MI'LLIUM.—Seed invested with the hardened inner glumes.

M. *effúsum.*—Branches of the panicle nearly verticilled. Cul *three to four feet high.*

CALAMAGRO'STIS (Hooker.)—Outer glumes two, much longer than the inner, which are surrounded by hairs or wool.

C. *epigéjos.*—Outer glumes awl-shaped, rough. Panicle erect, close, unilateral. Branches crowded with numerous clusters of florets; all on the outside; tawny green. Leaves narrow, rough, with long tapering points.

Hedge between Kilburn and Primrose Hill, near the Birmingham Railway; near the Beulah Spa, Norwood; Weston Wood, Albury. A variety from Mr. Pamplin with two florets, but in other respects like the common state of *epigéjos*, grows in the river Lea, near Lea Bridge, below Clapton.

C. *lanceoláta*?—Glumes keeled, smooth. Panicle erect, loose. Inner glume with a very short terminal awn.

Woods, &c. Northamptonshire, near Harringworth.

POLYPO'GON.—Outer glumes equal, awned, larger than the inner. Outer of the two inner glumes obtuse and awned.

P. *littorális.*—Has a spreading panicle of brownish and hairy florets. Leaves broad, short. Sheaths long, striated. Root creeping.

Essex coast.

P. *monspeliensis.*—Awns thrice as long as the rough glumes.

Woolwich marshes. Plant and locality supplied by Golding Bird, Esq.

Florescence spicate, i. e. spiked panicle. Florets single.

PHLE'UM.—Florescence densely spicate. Two outer glumes equal, compressed.—Inner unequal.

Ph. *praténse.*—Spike cylindric, outer glumes fringed at the keel.

Var. β Smaller, on dry banks on uplands.
Var. γ With bulbous roots, on flooded barren places.

Ph. *boehméri.*—Culms erect, shining, purple. Panicle spiked, cylindric. Outer glumes linear, lanceolate, acuminate, aristate, downy at the keel.

Masham, Norfolk—the Rev. George Munford.

ALOPECU'RUS.—Distinct from *Phléum* by its single inner glume awned from the base.

A. *praténsis.*—Spike tapering, obtuse. Much larger and earlier than the other species of *Alopecúrus.*

A. *agréstis* —Spike slenderer and pointed.

Cornfields.

A. *geniculátus.*—Culm rooting at the joints, and branching. Kneed or angled.

Ponds and places where water has lodged.

A. *fúlvus*?—Sheaths lax, striated. Anthers bluish. Spike larger than *geniculátus,* as thick as *praténsis.*

A. bulbósus.—Root bulbous. Spike attenuated, longer-awned than in geniculátus.

Salt marshes, Essex.

ANTHOXA'NTHUM.—*Florescence loosely spicate. Spike ovate. Florets with two stamens.*

A. *odorátum.*—A common, and very early sweetly smelling grass.

PHA'LARIS.—Florescence spicate or loosely clustered. Inner glumes hardened, investing the seed.

Ph. *canariénsis.*—Spike ovate, coloured green and white.

A weed in rubbish and cornfields. Middlesex, Kent, &c.

Ph. *arundinácea.*—Florescence a large unilateral, rather close, upright panicle. Leaves broad, spreading.

Ditches. Not rare.

AMMOPHI'LA.—Outer glumes two, equal, keeled, longer than the inner. A tuft of hairs at the base.

A. *arundinácea.*—Panicle cylindric, acuminate. Hairs one-third of the length of the acute glumes.

Beach, Mersea Island, Essex.

Panicle loose, spreading, two or more florets together, not in close or compact spiklets.

(PA'NICUM and SETA'RIA have spiked panicles.)

AIRA.—Outer glumes unequal.

A. *aquática.* (Catabrosa aquatica—Hooker.)—Outer scales membranous, very unequal, truncate (cut across), not half the length of the florets. Panicle erect.

A. *cæspitósa.*—Panicle large. Branches horizontal. Culm strong, tall, upright. Root leaves very rigid, spreading, matted.

A variety of A. *cæspitósa* on the Downs, usually three-flowered turgid spiklets. Awn very short, or none. Florets larger than in the more common variety.

G. *dístans.*—"Similar to *marítima.* Panicle deflexed, or much spreading. Leaves flat."

Usually found with the former. Dunchurch, Lydd, Kent—Rev. G. E. Smith.

G. *procúmbens.*—"Panicle compact. Much smaller than *marítima* and *dístans.* Culm procumbent. Panicle closer."

Salt marshes. Not rare.

PO'A.—Florets usually connected at the base by long woolly hairs. Spiklets flatter, more oval than in *Glycéria.*

P. *ánnua.*—Panicle much spread. Leaves bright green, spreading and flaccid. Culm procumbent, somewhat compressed. Florets not connected by hairs at their base.

P. *cómpressa.*—Culm leaning at the base, nearly flat, leafy. Panicle rather erect and close.

P. *praténsis.*—Culm tall and upright. Stipule very short, obtuse. Spiklets four to five florets.

Var. β. Leaves smaller and narrower, involute. P. *angustifólia* of Linnæus.

γ A glaucous variety.

P. *triviális.*—Whole plant rougher and stronger than *praténsis.* Also distinct from it by its long pointed stipule.

P. *nemorális.*—Much slenderer than the two preceding species. Panicle very lax. Spiklets two to three flowered. May be certainly known from its congeners by its short notched stipule.

This genus, with *Glyceria,* comprehends 148 species.

TRIO'DIA.—Outer glumes nearly equal. Larger inner glume toothed.

T. *decúmbens.*—Panicle almost simple, *i. e.* one spiklet on each branch; close and erect. Stipule a dense fringe of hair.

BRI'ZA.—Glumes cordate, obtuse. Spiklets bearing two rows of florets.

B. *média.*—Spiklets cordate, pendulous, on long slender filiform branches.

DA'CTYLIS.—Outer glumes compressed, keeled. (*Festuca* of some authors.)

D. *glomeráta.*—Panicle unilateral Spiklets clustered, having three to five florets, rarely one. Culm two feet, rigid, erect, rough.

FESTU'CA.—Outer glumes unequal, narrow and tapering. Spiklets cylindric, longer than the outer glume. Inner glume either sharp-pointed or awned from the apex.

F. *ovína.*—Root leaves long, setaceous. Culm four-angled below the panicle, which is erect and close. Spiklets of four to five florets, with short awns.

Var. β *rubra.*

F. *cæ'sia.*—Panicle unilateral, rather compact. Florets cylindric with short awns.

A variety of *ovína*—Hooker.

F. *duriúscula.*—Similar to *ovína*, but twice the size. Panicle spreading. Leaves flat.

Var. β with a downy scale. Panicle spreading when in flower, unilateral, with two branches from the joints, one longer than the other.

F. *praténsis.*—Spiklets flattish. Panicle upright, branching, unilateral. Florets without awns. Culm two feet high.

F. *elátior.*—Taller than *praténsis.* Panicle larger, and more branchy, and spreading. Culm strong and reed-like, with sedge-like leaves, and deeply penetrating root.

Meadows. Not rare.

F. *calamária*? an *decídua*? (Encyc. Bot.) Culm tall and upright. Leaves broad, striated, and keeled, horizontal. Panicle unilateral, with two branches from each joint, one longer than the other. Like *duriúscula* in florescence, but differs in its round smooth culm, and in being quite destitute of awns.

Chalky woods, Shere.

The following species have the habit of *Brómus*, but the essential character of *Festúca.*

F. *bromóides.*—Spiklets long, slender. Five to six-flowered. Awns long. Culm six to nine inches. Panicle upright and close, one to two inches.

F. *myúrus.*—Panicle very long, slender, and unilateral. Culm weak, twelve to eighteen inches high.

Both are found on walls near Jack Straw's Castle, Hampstead.

F. *gigantéa* (Smith), B. *gigantéa* (Hooker).—Panicle branching and drooping. Stipule auriculate. Florets on long pedicels, with long awns. Three to four feet high.

Beddington, &c. not rare. In appearance like *Bromus.* It has likewise the larger inner glume notched.

Var. β *triflora.* Woods. Not uncommon near Abinger Hall, Surrey.

F. *sylvática,*—Spiklets sitting, or nearly so. Awns longer than the glumes. Leaves and culm hairy and soft. A slender, bright green grass, with a drooping panicle.

F. *pinnáta.*—Spiklets sitting in two rows. Awn short. Leaves rigid.

Hedge between Kentish Town and Hampstead. Rare.

These two, *pinnáta* and *sylvática*, are the *Brachypodium pin.* and B. *sylvát.* of some authors.

In Sprengel's Species Plantarum seventy-four *Festúcæ* are described.

BRO'MUS.—Glumes broader than in *Festúca.* Larger inner glume notched, with the awn springing from behind the fork.

B. *móllis.*—Panicle erect, rather close. Spiklets ovate, cylindric, turgid. Whole plant soft and downy.

B. *racemósus.*—Less downy than *móllis.* Spiklets not flattened, but cylindric, tapering, shining; not downy and soft, but rigid.

B. *velutínus.*—Approaches *móllis.* Spiklet larger, flatter, and more lanceolate. Somewhat hairy and prickly, bearing ten or twelve florets. Differs from *secalínus* in being much more pubescent. Culm and leaves downy and soft, like *móllis.*

These two are probably varieties of *móllis.*

B. *secalínus.*—Panicle large, drooping. Spiklets flattish, and lanceolate. Flowers ten to twelve. Smooth shining glumes, rather farther apart than *velutínus.* Awns long and wavy, barely as long as the scales. Culm strong and upright, three to four feet.

B. *stérilis.*—Panicle large. Spiklets drooping. Branches three together. Awns longer than the glumes. About one foot high.

B. *ásper.*—Thrice as high as *stérilis.* Branches in pairs. Awns short.

B. *eréctus.*—Panicle upright, simple, with six-flowered spiklets. Stem rigid, wiry, and hairy at the base. Root leaves very narrow, tufted and ciliated.

On very dry pastures it is found with only two to three florets in each spiklet. Chalky downs about Shere, Dorking, Croydon, &c.

B. *praténsis.*—Similar to B. *eréctus.* Panicle smaller. Spiklets more turgid. Awn shorter. Scales not furrowed.

B. *arvénsis.*—Larger than either *praténsis* or *eréctus,* with a more spreading branchy panicle. Spiklets flatter, and hairy.

Chalky fields. B. *arvénsis* may be known from *praténsis* and *eréctus* by its larger size, and by its purplish spiklets. B. *eréctus* by its wiry culm, narrow root-leaves, and crocus-coloured anthers.

B. *diándrus.*—Panicle erect, and spreading. Culm about a foot high.

Known from the other species by its having only two stamens. Walls. Colchester, Battersea, &c.

A variety of Bromus *secalinus,* or *squarrosus?* Florets eight to nine. Spiklets unilateral, with short spreading awns. Field near Chipstead.

ARU'NDO.—Outer glumes many-flowered. Inner glumes surrounded with long hairs. Seed free, but covered by the glumes.

A. *phragmítes.*—Glumes five-flowered. Florets longer than the glume.

* * * * * Florescence in true spikes, *i. e.* florets or spiklets sitting.

HO'RDEUM.—Florets three together from one joint of the rach. Middle fertile, lateral two barren. Outer glumes (awns) long, narrow. Inner glume awned.

H. *murínum.*—Outer awn of the two lateral florets dilated at the base. Spike broad and close, two to three inches long.

H. *praténse.*—None of the awns dilated at the base. Spike longer and narrower than in *murínum,* taller.

H. *marítimum.*—One of the awns semilanceolate. The rest setaceous. The smallest of the three species, glaucous.

Gravesend and Northfleet.

TRI'TICUM.—Two exterior glumes on each joint, bearing one spiklet of four to six florets. Spiklets in opposite rows on the zigzag rach.

T. *rēpens.*—Outer glumes pointed, bearing about six pointed florets. Spiklets broad, tapering and pointed.

Var. β Outer glumes awned.

Var. γ Glaucous.

T. *canínum.*—Differs from *rēpens* in having awned florets; a slenderer culm and spike, and in having acuminate five-nerved outer glumes.

In chalky places, fields and hedges.

T. *júnceum.*—"Spike long. Spiklets compressed, distant. Florets four to five, awnless. Leaves involute, mucronate. Root creeping."

Beach, Stonehaven. Frequent on sea shores.

T. *loliáceum.*—"Spiklets distant, lateral, lower compound. Florets awnless. Leaves flat, linear, ridged. Culm wiry, branching from the base, three to four inches high.

Essex Coast. Hooker's Flora."

E'LYMUS.—More than one spiklet from each tooth of the rach. Outer glumes lax as in *Hórdeum.*

E. *europæ'us.*—Spiklets two to three at each joint. Florets one or two in each, awned. Root leaves numerous, rough, striated. Cauline broad, horizontal. Culm striated, rigid, two to three feet.

Chalky woods. In shaws (copses) above the fields behind the Fox, Ranmer Common.

E. *arenárius.*—"Spike close, erect. Spiklets two at each joint, hairy. Florets awnless. Leaves involute, pungent. Culms three to four feet high. Roots creeping."

Sand banks, Mersea Island.

E. *geniculátus.*—"Spike long, lax, bent downwards, with a rather acute angle. Spiklets two, glabrous.

In a salt marsh, Gravesend. Rare."

LOLI'UM.—One outer glume. Spiklets alternate.

L. *perénne.*—Spiklets long, tapering, closely pressed to the rach.

β L. *ténue.*—Spiklets very small, distant; scarcely so long as the outer glume.

γ Spike panicled, or branching into several spikes; *paniculátum.* (Dill, in Ray.)

δ Spiklets crowded; forming a very broad dense spike.

L. *temuléntum.*—Spiklets of six to seven turged florets, not longer *than the glume, usually shorter. More or less awned. Rach four-angular. Rough spike, six to ten inches.*

L. *arvénse.* Similar to *temuléntum* without the awns. Spiklets four to six-flowered, rather shorter than the outer scale. Fruit turged. Plants smooth.

Field near Chipstead—Mr. Turner's.

DIGITA'RIA—"Spikes compound. Spiklets unilateral. Outer glumes two to three, unequal, compressed, without awns. Inner glumes two, awnless, the exterior convex embracing the flattened interior one. Fruit coated with the hardened glume."

D. *humifúsa.*—Spiklets unilateral, several, divergent. Rach flat. Culms smooth, striated, spreading on the ground. Sheaths wide. Leaves short, broad, acuminate.

A neat-looking plant. On Weybridge Common, Surrey, near the village.

NA'RDUS.—Perianth single, of two glumes.

N. *strícta.*—Spike filiform, unilateral. Leaves rigid, setaceous, spreading.

Wet heaths. Common.

ROTTBO'LLIA.—Outer glumes two, containing one or two florets. Inner glumes, two. Florets imbedded in the rach.

R. *incurváta.*—Spike filiform or subulate, two to eight inches high, incurved.

Thames, by Gravesend. Not very rare.

KNA'PPIA.—"Outer glumes truncated, enclosing a single floret. Inner glumes unequal, hairy, obtuse."

K. *agrostídea.*—The only species.

Essex, mouth of the Thames.—Hooker's Flora.

In a sand-pit, behind the Fox, Wimbledon Common—Golding Bird, Esq.

SPARTI'NA—"Spike compound. Spiklets unilateral. Outer glumes unequal, compressed, lanceolate, acuminate, one-flowered. Inner glumes two, lanceolate, rather unequal. Styles united half way up."

S. *strícta* —"Spikes two to three, erect, with very smooth stalks. Outer valves of the calyx (outer glumes) smallest. Stems rigid, about a foot high, concealed by the sheathing bases of the short, pungent, involute leaves."—Hooker in British Flora.

Coast about Southampton; not rare—Mr. Wm. Pamplin.

S. *alternifólia.*—"Spiklets numerous, (four to thirteen), coarctate. Florets glabrous. Larger glume (calyx), with strong lateral nerves. Emarginate below the pilose apex. Leaves continuous with the sheaths, dilated at the base; longer than, or as long as, the flower spikes. Raches much produced beyond the terminal florets of each partial spike into a flexuose awn-like point"—(Broomfield).

"Mud banks on both sides of the Itchen, above the ferry at Southampton; very abundant. Discovered by the Rev. W. Broomfield, 1836. Flowers in July and August. Perennial. Broom-

field, in Companion to Botanical Magazine, ii. p. 258. Kunth, 279. Trachynótia alternifólia. (D. C. Fl. Fr. and Bot. Gal. 527)? S. glábra (Muhlenb.)? S. lævigáta (Link.) Dáctylis marít. (Wall.)—Macreight's Manual of British Botany, 1837." This new discovery, together with the description, was communicated by Thomas Ralph, Esq.

DIVISION C.

Perianth single or double. Ovary superior.

Order XI.—JUNCACEÆ.

Perianth minute, six-parted. Capsule three-valved, many-seeded. Culm roundish, tapering. Leaves, (if any) grassy. Near *Cyperaceæ* in habit.

JUNCUS.—Perianth of six pieces. Capsule three-valved, one to three-celled, many-seeded.

* Culms leafless.

J. *acútus.*—"Barren scapes and outer bracteas (bracts) pungent. Panicle very compound, mostly compact. Clusters two to four-flowered. Leaflets of the perianth equal. Interior ones with a broad membranous margin at the apex, shorter than the broadly ovate, suddenly acuminated capsule."—Hooker.

Sand hills near Sandwich—Rev. G. E. Smith.

J. *glaúcus.*—Panicle lateral, erect. Pieces of the perianth awl-shaped, acute, mucronate. Culm hard and glaucous.

J. *conglomerátus.*—Panicle lateral, spreading, much branched. Capsule obovate, blunt. Culms soft and brittle.

J. *effúsus.*—Panicle lateral, spreading, much branched. Capsule obtuse. Culms soft and brittle. This species differs from *gláncus* in its more divergent panicle, blunt capsule and softer culm. J. *conglomerátus* has a denser panicle, and three stamens. J. *effúsus* has six.

J. *squarrósus.*—Culms very rigid. Panicle terminal, compound, branched and flat. Root-leaves turfy, matted.

On moist moors; common. Wimbledon, Epping Forest, &c.

** Culms leafy.

J. *acutiflórus.*—Panicle compound. Peduncles longish, filiform, bearing clusters of florets. Perianthine pieces narrow, not quite so long as the long ovate capsule.

J. *lampocárpus.*—Known from *acutiflórus* by its large black shining capsules, and more obtuse sepals.

J. *obtusiflórus.*—Leaves tapering, not compressed nor channelled. Florescence much divaricated. Sepals short. Capsules obovate.

Plentiful in Beddington Park, near Croydon; Hurtwood; Leith Hill, &c.

J. *compréssus.*—Leaves compressed, slightly grooved. Florets sessile, four to five. Plant six inches high. Smaller than the foregoing species. Leaves long, roundish, grooved on the inside, with a membranous sheath at the base.
Beddington Park.

J. *cœnósus* of the E. Flora, known by its simple few-flowered panicle longer than the bracts, is reckoned by Dr. Hooker a variety of J. *compréssus.*
It is abundant in the salt marshes of Essex.

J. *uliginósus.*—Culm three to five inches. Bulbous rooted. Leaves setaceous. Panicles usually with three florets in each cluster.
β Clusters of florets proliferous, bearing bulbs and leaves.
γ Culm thrice as tall as α. Panicle more divergent. Clusters o five to ten florets.

J. *subverticillátus.*—Culm filiform, creeping. Leaves setaceous, growing in tufts among and through the clusters of florets.
Clay-pits on Golder's Green; common.
Sir Wm. J. Hooker joins J. *uliginósus* and J. *verticillatus.* In rather dry places it has a swollen or bulbous base, and becomes the *bulbosus* of Linnæus. When the stems are spreading and procumbent, it becomes the J. *subverticillátus* of Wulfen.

J. *bufónius.*—Root and panicle leafy. Florets solitary, with leafy bracts. Capsules triangular, long.
β Smaller, less branchy, reddish.

LU'ZULA.—Perianth as in *Juncus.* Capsule three-celled, with one seed in each.

L. *sylvática.*—Leaves broad, shining, and striated. Peduncles about three-flowered. Sepals awned, as long as the capsule.
β Clusters dense. Capitate six to ten florets.

L. *pilósa.*—Leaves narrower than *sylvática.* Peduncles one-flowered, reflexed.

L. *forstéri.*—Leaves much narrower than in *pilósa.* Panicle less diverging, more upright. Capsules acuminate,—in *pilósa* blunt.

L. *campéstris.*—Leaves narrow. Culm four to seven inches. Florescence in several roundish terminal spikes, some sessile, some peduncled, many-flowered.
Fields and meadows. The three former species in woods.
L. *congésta.*—(A variety of J. *campéstris.*)—Florets either in one roundish dense cluster, or in three to four ditto. Much stronger, and generally taller than the largest specimens of L. *pilósa.*
L. *congésta*—Another variety, with stout culms, long and broad leaves. Florescence in several spikes.
Woods. *Júncus*, or *J.* and *Lúzula* together, contain 80 species.

Order XII.—LILIA'CEÆ.

(See Natural System, page 41.)

1. TULIPI'NEÆ.

TU'LIPA.—Perianth campanulate, of six pieces. Stigma sessile, three-lobed. Capsule three-angled, with flat seeds.

T. *sylvéstris.*—Stem single-flowered. Pieces of the perianth acuminate, bearded at the extremity. Flowers yellow, somewhat drooping. Leaves linear, lanceolate.

With *Anemone Apennine.* Wimbledon Park—Mr. William Pamplin.

FRITILLA'RA.—"Perianth campanulate of six pieces, with a cavity at the base of each. Capsule oblong, with flat seeds."

F. *meleágris.*—Stem single-flowered. Leaves alternate, linear, lanceolate. Tips of the perianth inflexed.

In a boggy meadow between Kew and Mortlake.

2. SCILLI'NEÆ.

Perianth six-parted, or in six pieces, coloured. Seed black, crustaceous, (invested with a brittle shell.)

HYACI'NTHUS.—Perianth deeply six-parted. Segments upright. Stamens filiform. Seeds roundish.

H. *nútans,* or *nónscriptus.*—Florescence, a lax drooping spike. Pedicels, with two bracteas.

Woods; common.

MUSCA'RI.—"Perianth of one piece, ovate, inflated, six-toothed. Capsule with prominent angles, and two-seeded cells."

M. *racemósus.*—Leaves concave. Scape tapering five to six inches. Flowers deep blue, in an ovate cluster.

Colchester town-wall, below St. Mary's.

SCI'LLA.—Perianth of six pieces, deciduous. Filaments inserted at the base of the perianth.

S. *autumnális.*—Bulb coated. Raceme scarcely corymbous. Bracteas none. Pedicels and stamens about as long as the perianth. Leaves linear.

Kew Green, and Moulsey Hurst, Surrey. Blackheath and Richmond—Rev. G. E. Smith. Ham, Surrey; and Shorne, Kent. —Mr. Wm. Pamplin.

ORNITHO'GALUM.—Ovary six-rayed. Stamens alternately dilated at the base. Perianth six-parted, spreading.

O. *umbellátum.*—Stamens flat, elliptic. Pieces of the perianth elliptic, with a green stripe on the back. Stipules scarious.

Purley Oaks, near Croydon. Between Wandsworth and Putney. Mr. William Pamplin.

O. *pyrenáicum.*—Scape long, bearing an elongated raceme of *smallish, greenish, white flowers on spreading pedicels. Fruit* erect.

I gathered a solitary plant of this species near Send, about four miles from Guildford, on the London Road.

O. *umbellátum* grows in the midst of Battersea fields—T. Ralph, Esq.

Two species in Wimbledon Park—Mr. William Pamplin.

Of this genus Sprengel describes 62 species.

A'LLIUM.—Florescence umbellate, with a cleft spathe. Perianth as in *Scílla.* Segments diverging. Capsule triangular.

A *carinátum.*—"Umbels bearing bulbs, lax. Leaves linear, keeled. Stamens all simple. Leaves of the spathe very unequal. Flowers upon long wavy peduncles, pale-brownish, white."

" Near Ramsgate. Between Sandwich and Deal. Hudson, Flora Anglica."—Rev. G. E. Smith in Plants of S. Kent.

A. *ursínum.*—Leaves radical, large, oval, acute. Scape (flower stalk) smooth, three-angled. Flowers large, white.

Edgeware Road, beyond Kilburn. Hendon, &c. Buckland, near Reigate—Mr. William Pamplin.

A. *vineále.*—Stem tough and hard, bulbiferous. Flowers brownish-green, striated, pendulous.

Field near Chipstead—Mr. Turner's. About Colchester. Hill above Vale Cottage, Albury—The Hon. Miss Addington.

Of the genus *A llium,* according to Sprengel, 126 species are known and described.

3. ANTHERICI'NEÆ.

Perianth and ovary as in *Scillíneæ.* Roots fibrous or fascicled.

NARTHE'CIUM.—Perianth of six pieces, partly coloured, spreading, persisting, and after flowering enclosing the ovary.

N. *ossífragum.*—Leaves (radical) ensiform. Scape simple. Florescence spicate. Flower yellow.

Bogs about Leith Hill.

4. CONVALLARI'NEÆ.

Fruit a berry. Flowers usually pendulous. Habit *dicotyledonous.*

SMILACI'NA —Filaments attached to the base of the segments of the perianth. Flowers terminal, panicled, or umbellate.

S. *bifólia,* (C. *bifólia,* Lin.) Leaves cordate, lower petiolate,* upper sessile. Flowers small, in a terminal raceme.

Two patches of this plant near the top of the Fir Hill, in the Earl of Mansfield's Park, Caen Wood.

CONVALLA'RIA.—Style longer than the stamens. Stigma three-angled. Flowers campanulate, terminal.

C. *maialis.*—Scape, with two radical leaves, bearing a pendulous spike of bell-shaped, odorous, white flowers.

POLYGONA'TUM. (Lind.)—Flowers cylindric, axillary. Filaments inserted near the top.

P. multiflórum.—Stem round. Leaves alternate, amplexicaule, (stem-clasping.) Peduncles bearing more than one flower.

Wood at North Cray, Kent—D. Cooper, Esq. Woods near Alton, Hants, and Midhurst, Sussex—Mr. Hobbs.

5. ASPARAGI'NEÆ.

RUSCUS.—Diœcious. Perianth of six pieces. Stamens three. Berry three-celled, with two seeds in each.

R. *aculeátus.*—Leaves elliptic, acute, prickly. Florets sitting on the leaves. Shrub, evergreen, one to two feet high.

ASPA'RAGUS.—Perianth six-parted, or of six pieces. Fruit a berry, three-celled.

A. *officinális.*—Flowers solitary, axillary, pendulous, greenish white. Stems branchy, tapering.

Near the Mill, Waddon, Surrey; probably not wild. Cliff near Hemswell, Spittal, Lincolnshire.

* MELANTHEÆ.

Perianth coloured in six pieces, (*Páris* eight.) Stamens six, rarely eight. Ovary three-celled, with a trifid, or three-parted style. (*Páris* four styles.) Fruit capsular, (in *Páris* a four-celled berry.)

PA'RIS.—Seeds in two rows. Stamens eight. Styles four.

P. *quadrifolia.*—Leaves whorled in fours, rarely in fives. Oval, acute, growing out of the stem near its summit, the rest of the stem leafless. Pieces of the perianth linear, lanceolate, uncoloured. Berry very juicy, black.

Rockingham Forest, between Kingscliff and Wansford, with five leaves. Wood near Chiselhurst—Mr. William Pamplin. Stonar Hill, near Petersfield, Hants.

Order XIII.—BUTOMA'CEÆ.

Flowers in umbels. Fruit many-seeded follicles. Perianth of six coloured pieces.

BU'TOMUS.—Stamens nine. Ovaries and styles six.

B. *umbellátus.*—Scapes tall, round, tapering. Leaves triangular.

Order XIV.—ALISMA'CEÆ.

Perianth double. Three outer pieces uncoloured, inner coloured. Styles and ovaries numerous. Fruit a cluster of dry carpels, sometimes with more than one seed in each.

ALI'SMA.—Stamens six. Styles many. Carpels one-seeded.

A. *plántago.*—Leaves oval, acute. Capsules three-angled, obtuse.

A. *ranunculóides.*—Leaves linear. Capsules angular, acute, forming a globular head. Umbel larger than in *plantágo.*

On Finchley, Wandsworth, and Mitcham Commons.

ACTINOCA'RPUS.—Carpels six to eight, combined at the base and radiating, each containing two seeds.

A. *damasónium.*—Peduncles verticillate. Carpels with a subulate, mucronate termination. Three outer pieces of the perianth *scarious, persisting. Three inner petaloid, white, fugacious.*

Golder's Green, Hampstead. Woodford, Essex. Wandsworth Common. Walton on Thames. Ponds, Hurtwood common, Shere.

SAGITTA'RIA.—Monœcious. Three outer pieces of the perianth uncoloured, three inner coloured. Stamens indefinite.

S. *sagittifólia.*—Leaves arrow-shaped. Flowers large and handsome, white, violet in the centre.

Common in the Thames. Wey, Surrey. Lea and Rhoding, Essex.

DIVISION D.

Perianth single or double. Ovary inferior.

Order XV.—DIOSCOREA'CEÆ.

Perianth six-parted, or in six pieces. Flowers diœcious. Fruit a berry.

TA'MUS.—Stamens six. Style three-cleft. Berry three-celled, two-seeded.

T. *commúnis.*—Leaves alternate, cordate, entire. Stem climbing. Flowers greenish.

Hedges.

Order XVI.—IRIDA'CEÆ.—(Irideæ.)

Perianth six-cleft or parted. Stamens three, growing out of the three outer segments of the perianth.

I'RIS.—Alternate segments of the perianth reflexed. Stigmas petalloid, (petal like.) Seeds circular.

I *pseudácorus.*—Flowers yellow, with black lines. Leaves (ensiform) sword-shaped, erect.

I. *fœtidissima.*—Flowers bluish. Stem angled, not so tall as the former. Leaves narrower.

Woods in Kent. About Cobham, Dartford, &c.

The genus *I'ris* contains 94 species.

CRO'CUS.—" Perianth six-parted, equal. Stigma coiled."

C. *vérnus.*—Stigma included, trifid. Lobes of the perianth incised.

Meadows, Nottingham, in abundance.

C. *satívus.*—Stigma three-parted, exserted, fulvous. Segments of the violet-coloured perianth longer.

Suffolk.

C. *nudiflórus.*—Stigma trifid, included. Lobes of the perianth multifid. Leafless.

Nottingham, meadows.

These three species were received from Mr. William Pamplin.

Order XVII.—AMARYLLA'CEÆ.

Leaves radical, fleshy. Roots bulbous. Stamens six. Perianth and ovary as Iris.

NARCI'SSUS—*Perianth with an entire, crenated, or divided* • crown. Stigma trifid.

N. *pseudo-narcissus.*—Scape one-flowered, crown bell-shaped, six-cleft, with crenated segments. Equal to the erect yellow divisions of the perianth.

Near Banstead, &c. Surrey. In a field behind the King's Head, Millhill, there are two or three species or varieties of this plant.

N. *poëticus.*—Spathe single-flowered, with a very short crown. Limb spreading, obtuse. Distinguished from *biflórus* by the pure white flowers, and the bright coloured edge of the crown.

N. *biflórus.*—Spathe two-flowered.

These two species grow at Thorne, between Gravesend and Rochester.

About 100 species have been described.

GALA'NTHUS.—Three interior segments of the perianth shorter, notched. Stigma simple.

G. *nivális.*—Scape two-keeled, tapering, one-flowered. Leaves obtuse, radical.

Ruffets near Banstead Park—James Turner, Esq.

LEUCO'JUM.—Perianth of six equal pieces, thickened at the point. Spathaceous.

L. *æstívum.*—Spathe many-flowered. Style clavate.

Thames side below Greenwich, especially the Kentish shore—Mr. E. Forster.—(Hooker's British Flora.)

Order XVIII.—HYDROCHAR'ACEÆ.

Perianth double of six pieces, three inner coloured. Styles three to six. Ovules indefinite in a single, one or many-celled, ovary. Known from other tribes of this class by their tripetaloid flowers, and inferior ovary.

HYDRO'CHARIS.—Diœcious. Barren flowers, with three stamens. Fertile, with six styles, and a six-celled ovary. Outer perianth of both, trifid. Inner of three petaloid pieces.

H. *mórsus ránæ.*—Leaves broadly cordate, floating. Flowers white.

Isle of Dogs. Deptford marshes. Ditch, near Hackbridge.

STRATIO'TES.—Flowers and ovary as *Hydrócharis*, with the addition of a two-leaved spathe.

S. *alóides.*—Leaves ensiform, three-angled, serrated, upright. Root floating.

Pond on Wandsworth Common, originally put there by Mr. Anderson, Curator of the Chelsea garden. Fens in Lincoln, &c.

Order XIX.—ORCHIDA'CEÆ.—(ORCHIDEÆ).

Perianth double, in six portions. Outer three, forming a kind of helmet; two of the inner lateral, and similar; the third pendent, or horizontal, various and singular in its form. Ovary one-celled, many-seeded.

OR'CHIS.—Lip (third lobe of inner perianth) roundish, or oblong, *ending behind in a tubular horn-like spur. Capsule oblong spiral. Segments of the outer perianth spreading or* converging.

O. *mório.*—Lip four-cleft, somewhat crenulate. Spur blunt, ascending. Inner lateral segments of the perianth converging, dark purple, with greenish lines. Spike lax, with coloured lanceolate bracts.

A variety with pure white flowers, in a marsh above Peslick; Shere, Surrey.

O. *máscula.*—Lip as in *mório.* Lateral segments reflexed, three-nerved. Leaves broad, lanceolate, with dark purple spots. Both stem and spike twice as large as in *mório.* Bulbs undivided.

Woods.

O. *latifólia.*—Three upper and outer sepals spreading; two inner conniving. The lip slightly three-lobed. Spur shorter than the ovary. Bracts longer than the flowers. Leaves pale, sometimes spotted.

Blossoms a month later than *máscula.* Flowers red, pink, or white. In marshy places.

O. *maculáta.*—Lip three-cleft. Spur awl-shaped. Flowers whitish, and spotted. Spike dense. Leaves lanceolate, acute, spotted.

A variety with pure white flowers. This *O'rchis* grows on chalk, loam, and on peat, in woods, on downs, in bogs, and on dry heathy hills, as on Leith Hill, &c.

O. *ustuláta.*—"Lip four-cleft, rough. Spur much shorter than the ovary. Outer sepals dark-coloured. About a hand high."

Grows on chalky pastures. Headly, Surrey—Mr. William Pamplin.

O. *militáris.*—"Lip five-cleft, rough. Lobes linear. Sepals acuminate. A foot high."

On chalky hills. Grows with the former, near Streatly, Berks. Mr. William Pamplin.

O. *conópsea* (Gymnadenia, Hooker).—Lateral pair of outer perianthine segments, spreading; central, upright. Lateral inner segments conniving. Lip entire. Spur setaceous, very long. Bracts green, lanceolate, acuminate. Spike dense.

Chalk pit, above Halling, Croydon. On chalky downs, and in woods and copses. A variety with pure white flowers.

O. *téphrosanthos.*—Lip three-parted, with linear segments. Outer sepals acuminate connivent, including the two lateral inner pieces. Smaller and slenderer than O. *militáris.* Spike short.

Near Streatly, Berks; rare—Mr. Wm. Pamplin.

O. *hircína.*—Lip three-parted, with linear segments. The intermediate one twisted and very long. Spur very long.

The largest and handsomest of the genus, found in Kent, near Dartford, but very rare.

O. fúsca.—Differs from militáris in its larger size, and in having the segments of the five-cleft lip dilated, not linear. Outer sepals dark, and tawny; inner red, and linear.

About fields between Cobham and Gravesend.

O. *víridis.* (Habenária — Hooker). —Lip linear, three-toothed. Spur very short. Flowers greenish, shorter than the bracts.

Pastures near Caistor, Northamptonshire.

O. *pyramidális.* (Anacamptis—Lindley).—Lateral pair of inner perianthine segments fornicate. Outer three erect. Lip trifid, with two prominent nectaries at the base. Laciniæ entire. Horn (spur) as long as the ovary. Bracts coloured, shorter than the ovary. Flowers purple in a close spike. Bulbs undivided.

Chalky pastures, &c. near Coulsdon. Ranmer Common, &c. The plants usually referred to this genus amount to above sixty.

HABENA'RIA.—Outer segments lanceolate, entire, spreading. Two inner lunulate, entire, reflexed. Lip linear. Spur long, setaceous.

H. *bifólia.*—Leaves broad, lanceolate, elliptic, obtuse. In large plants three to four leaves; usually two. Bulbs two.

Woods about Albury and Shere, not uncommon. Woods, Hampstead, rare.

H. *chloróntha.*—Spur half as long as the ovary; in H. *bifólia* twice as long. Lip oval, lanceolate scarcely longer than the outer segments of the perianth. Flowers larger, greener, and earlier.

Epping forest, near High Beech. The author is indebted to Mr. William Pamplin for a specimen and an account of this plant, which is new to the British Flora.

A'CERAS. — Outer segments concave, fornicate, green, with brown lines; inner, lunulate, entire. Lip pendulous, lacineated. Laciniæ linear.

A. *anthropóphora.*—Stem leafy. Leaves elliptic, lanceolate, acute, amplexicaule. Bulbs undivided.

Banks, Sanderstead Downs. Common on Albury and Shere Downs.

LISTE'RA.—Upper sepals (pieces) concave, conniving, short. Lip pendulous. Bifid.

L. *ováta.*—Stem with two oval leaves. Flowers green, in a long spike. Bracts very short.

Hampstead wood, between the Spaniards and Finchley. Woods and meadows about Albury, &c.

L. *nídus ávis.*—Stem scaly, tall, slender, rigid. Bracts very short. Lip linear, with two spreading lobes.

In Gatton Park, Surrey. Rockingham Forest, Wansford.

O'PHRYS.—Outer segments spreading. Lip without a spur.

O. muscífera.—The two upper interior segments linear, like the antennæ (feelers) of a fly. Lip trifid. Middle lobe bifid. Flowers few, unilateral.

Near Chipstead—Banstead, &c.
Juniper Hill, near Dorking; Chalk Pits, near Albury and Shere; Ranmer Common, near Denbies.

O. *apífera.*—Three upper segments lanceolate, rose-coloured, spreading. Lip inflated, five-cleft, middle segment linear, subulate, and recurved. Column hooked.

Juniper Hill, Chalk Pits, and Downs, about Albury, &c.

O. *apifera.*—Var. Stem considerably taller than that of *apifera,* fifteen to eighteen inches, leafy. Lip not so flat, broader, greenish, hairy, more deeply cleft. A variety with a double lip; another with a double column.

Mr. Dennison's Park, near Dorking Lane, rather later than *apifera.*

Var. with a white flower, Boxhill—Mr. William Pamplin.

O. *araníferu.*—Upper segments green. Lip trifid. Middle segment longest, and notched. Column upright, sharp. Stem about half the height of *apífera.*

Dover—Mr. William Pamplin. In the wood behind the house of Edmond S. Lomax, Esquire, Shere. Communicated to the author by Henry Drummond, Esquire, of Albury Park.

O. *fucífera.*—Differs from *aranífera* in the lip being undivided, roundish, only slightly notched at the apex.

Hartlip, Kent—The Rev. G. E. Smith. Swanscomb Wood, near Northfleet—D. Cooper, Esquire.

O. *arachnítes.*—" Lip longer than the outer segments of the perianth, with shallow, inflexed, marginal lobes. Column with a hooked point.

Between Folkestone and Sittingbourne"—Rev. G. E. Smith.

NEO'TTIA.—Perianth of converging pieces, the two lateral including the lip.

N. *spirális.*—Spike filiform, unilateral, twisted, hence the name—Lady's Tresses—(Tresses of our Lady, *i. e.* the Virgin Mary.)

Not uncommon on Sanderstead and Purley Downs; on the south side of the Ranmer hills, rather scarce.

EPIPA'CTIS.—Stigma (nectary) ventricose. Stamens (anthers) attached to its labiate, persisting lower edge.

E. *grandiflóra.*—Leaves amplexicaule, elliptic. Bracts longer than the ovary, which is striated, and compressed. Lip obtuse, wavy, crenate, or serrate, tawny and white. Sepals upright, closing. A foot high.

E. *latifólia.*—Leaves oval, lanceolate, amplexicaule. Bracts linear, lanceolate, horizontal, or deflexed. Lip pointed, entire. Sepals spreading, upright, lanceolate, greenish. Flower-spike four to six inches. Plant one or two feet high.

A Var. from Lingfield, Sussex, with a leafy spike of pendulous, *dull, pinkish flowers, nine to twelve inches.*

Another from Stonar-hill wood, three miles beyond Petersfield, on the Alton Road, with a very rigid, somewhat angular, stem. *Spike short, few-flowered. Flowers* a deep purple, almost black.

E. *palústris.*—"Lip obtuse, crenated, equal to the sepals. A foot high. Flowers large, white and purple."

Southorpe Bog, Northamptonshire, along with *Samólus valerandi, Parnassia palustris, Pinguicvla vulgáris,* &c. Said to grow in Nutthall Marshes, near Reigate. Ham Ponds, near—Mr. William Pamplin.

MALA'XIS.—Segments of the perianth spreading. Lip very small, undivided, without a spur, The two lateral inner segments reflexed, smaller than the outer. Column very short.

M. *paludósa.*—Leaves four to five, oval, very concave, papillose at the extremity. Lip concave, acute.

Gamlingay Bog—Cambridgeshire.

CLASS III.—DICOTYLE'DONS, (Exogenes).

Bark, wood, and pith distinct. Leaves with branching nerves. Seeds with two cotyledons (usually) *i. e.* germinating with two seed-lobes.

DIVISION A.

Flowers without a perianth, or having its place supplied by a scale.

Order XX.—CONIFERACEÆ.—(Coniferæ.)

Fruit, a cone, composed of layers of woody scales, containing several (sometimes many) uncovered seeds. (In Juniper and Yew a berry.) Flowers amentaceous, monœcious, or diœcious. Leaves very narrow, sharp pointed, opposite, whorled or tufted. Wood resinous. (Seeds polycotyledonous.)

PI'NUS.—Fruit conical tapering. Scales thick and angular at the tips. Leaves usually in twos, sometimes in threes and fives, enclosed in a membranous sheath.

P. *sylvéstris.*—Cones acute, as long as the leaves.

JUNI'PERUS.—Barren flowers, amentaceous. Fertile flowers, few, with fleshy scales, forming a sort of berry, bearing three seeds.

J. *commúnis.*—Leaves whorled, mucronate, imbricated or spreading.

Very common on the Downs, and in upland heaths and woods.

TA'XUS.—Fruit a fleshy drupe, perforated at the apex. One seeded.

T. *baccáta.*—Trunk large, top spreading.

Merrow Downs, in great abundance.

Order XXI.—AMENTA'CEÆ.

Flowers as in the pine tribe. Obviously distinguished from that family by the broader, stipulate leaves.

Sub-Orders.

1. QUERCI'NEÆ.

Barren flowers, amentaceous. Fertile, clustered within a coriaceous involucre. Ovaries with several cells. Fruit, by abortion, a single one-seeded nut, sometimes two-seeded; either in a woody or coriaceous cup, or partially covered by the enlarged involucre.

QUE'RCUS.—Barren flowers in a lax ament. Ovary three-celled, two of which are abortive. Nut two-celled, one-seeded, sitting in the scaly cup.

Q. *róbur.*—(*Sessiliflora*)—Fruit sessile, the florets are sessile on the peduncle in both. In this the peduncle is very short, in the next it is long.

Q. *pedunculáta.*—Nuts, in pairs, on a long peduncle.

This is the *Róbur* of Hooker.

The species of *Quércus*, according to Sprengel, amount to one hundred and ten.

CASTA'NEA.—Ament very long. Fertile flowers two to three, in a muricated thick involucre, with which the one to two-seeded nut is invested.

C. *vésca.*—Leaves oblong, serrated, acuminate, sharp pointed.

Albury Park, Betchworth, &c.

FA'GUS.—Ament globular. Fertile flowers in a four-lobed prickly, involucre, which is enlarged and invests the one-seeded nut.

F. *sylvática.*—Leaves glabrous.

A variety with dark purple leaves, common in Albury Park.

CO'RYLUS.—Aments cylindric, with three-cleft scales. Ovaries several, surrounded by scales, which unite and form a leafy indurated cup for the one-seeded nut.

C. *avellána.*—Involucre (capsule of some) spreading, torn.

2. BETULI'NEÆ.

Fertile flowers in aments. Fruit one-seeded, compressed.

CARPI'NUS.—Ament of barren flowers cylindric; fertile lax, with large leafy, three-lobed, one-flowered scales. Ovary two-celled, one abortive. Seed ovate, striated, compressed.

C. *betúlus.*—Leaves with parallel veins.
Epping Forest.

BETU'LA.—Aments cylindric, three florets in each scale. Nuts with a membranous margin.

B. albá.—Leaves oval, acute, smooth, and serrated. Bark white.

ALNU'S.—Fertile flowers in ovate aments. Two florets on each scale. Stamens four. Nuts compressed.

A. *glutinósa.*—Leaves large, roundish, glutinous. Axils downy underneath.

3. MYRICI'NEÆ.

Fruit drupaceous, with a solitary seed. Known from the other tribes of *Amentáceæ* by their waxy secretions and their aromatic leaves.

MYRI'CA.—Diœcious. Barren florets, with eight stamens and concave scales. Fertile florets with two styles.

M. *gále.*—A small shrub with lanceolate serrated leaves.
Fens of Huntingdon and Cambridge, &c.
Very common in the bogs and moory parts of Scotland.

4. SALICI'NEÆ.

Aments cylindric. Fruit capsular, many-seeded.

POPU'LUS.—Stamens eight. Styles four. Capsule two-celled, many seeded.

P. *albá.*—Leaves somewhat cordate and lobed at the base, angular, obtusely acuminate, very downy and white beneath. Fertile ament ovate.

P. *canescēns.*—Leaves roundish, sinuated, toothed. Aments longer than *álba*, and cylindric.

P. *trĕmula.*—Leaves small, roundish, toothed, finely reticulated below, on long flat foot-stalks.

P. *nígra.*—Leaves pointed. Branches upright. A very tall tree.

P. *dilatáta.*—An exotic Poplar, has leaves like *nígra*, but broader across the mid-rib.

P. *trĕpida.*—Another exotic, approaches *trĕmula* in appearance, has larger, acuminate leaves, not reticulated on the under side like *tremúla.*

SA'LIX.—"Flowers diœcious. Scales of the ament single flowered, imbricated with from one to five stamens. Scales of the fertile flower with one style and two stigmas, with a one-celled, many seeded, capsule. Seeds enveloped, or furnished with a quantity of cottony or silky hairs."

It is probable that nearly twice the number of Willows noticed here, is to be found in the district to which this Flora chiefly refers. But, as the author was unable to identify them satisfactorily, it has been thought preferable to insert the greater number under the Linnæan arrangement.

The names and descriptions are, for the most part, from Hooker's British Flora.

Section 1.—" Flowers with one filament and two anthers. Trees or shrubs. Leaves lanceolate and serrated. Ament compact."

S. *hélix.—Leaves glabrous, attenuated below, broader upwards.* Ovaries very pubescent, sessile. Stigma linear.

S. *rúbra.*—Leaves linear, lanceolate, acuminated, glabrous, green on both sides.

Maidenhead and Windsor.—Hooker's Flora.

Section 2.—" Flowers with three stamens. Leaves lanceolate, approaching to oval, serrated. Aments lax. Ovaries pedicelled."

S. *triándra.*—Leaves acute, glabrous. Ovary glabrous. Scales retuse. Stigmas retuse, sessile. This becomes a tall tree, twenty to twenty-three feet high, if left to itself.

S. *amygdalína.*—Leaves rounded at the base, acute at the tips. Ovary stalked. Stigmas bifid, sessile. Young branches furrowed.

In shrubberies, about London. I have seen it in the garden of Mornington Crescent, Camden Town.

Section 3.—Flowers with five stamens, or five oftener than three. Ovaries glabrous. Trees of moderate size, with large glossy fragrant leaves, exuding a resin from the glandular serratures.

S. *pentándra.*—Leaves elliptical. Style very short. Stigmas bifid.

Section 4.—Stamens two. Trees of considerable size, with stipulate leaves. Very lax aments. Ovaries elongated, more or less stalked.

S. *dicípiens.*—Leaves lanceolate, pointed, very glabrous. Floral leaves partly ob-oval and recurved. Petioles somewhat glandular. Ovaries tapering. Style longer than the cloven stigmas. Branches smooth, polished.

S. *frágilis.*—Leaves oval, lanceolate, acute. Ovary on a short pedicel, oblong, ovate, glabrous. Style short. Stigmas bifid. Scales pubescent, much ciliated.

In the fields between Kentish Town and Highgate.

S. *russelliána.*—Leaves tapering at each end, strongly serrated, very pale beneath. Ovaries pedicelled, acuminate, glabrous. Style as long as the bifid stigmas. Scales narrow, lanceolate, slightly ciliated or pubescent.

Section 5.—Leaves with long silky hairs below, serrated. Aments lax. Ovaries glabrous.

S. *álba.*—Leaves elliptic, lanceolate, glandulose, often silky above. Ovary nearly sessile, glabrous. Stigmas almost sessile, short, recurved, bifid. Scales short, pubescent at the margin.

S. *vitellína.*—Leaves lanceolate, with glandular serratures, acuminate, often silky above. Ovaries lanceolate, sessile, glabrous. *Style short. Stigmas two-parted. Scales lanceolate. Known by the bright yellow branches.*

Section 8.—*Stems procumbent. Leaves silky beneath. Almost* entire. Aments ovate or cylindric. Ovaries silky stalked.

S. *fúsca.*—Leaves elliptical, or lanceolate elliptic, acute, entire, or with minute glandular serratures, somewhat downy, glaucous, and generally very silky beneath. Ovaries on a long stalk, very silky. Stigmas bifid. Stems procumbent.

Var. β. Stem depressed, with short upright branches.

S. *repéns.*—English Botany—Hampstead Heath.

Other varieties of this Willow grow on Putney Heath, Walton Common, and Heaths about Tunbridge Wells, &c.

S. *ambígua.*—Leaves ob-oval, slightly serrated towards the tips, downy above. Aments lax. Ovaries on long hairy pedicels. Style more or less elongated.

Var. a.—Stigmas sessile or nearly so—Epping Forest.

Section 12.—*Osiers.*—Trees more or less lofty, with long pliant branches and lanceolate leaves. Ovaries nearly sessile, longish. Styles with linear, mostly entire stigmas.

S. *viminális.*—Leaves linear, lanceolate, slightly crenated, white and silky beneath, with small sub-lanceolate stipules. Branches straight and twiggy. Ovaries subulate, on very short pedicels. Stigmas long, linear, mostly entire.

S. *stipuláris.*—Leaves indistinctly crenate, white and downy below, with large semi-cordate acute stipules, often with a tooth at the base. Ovaries very downy, with a long style. Scales shaggy.

S. *acumináta.*—Leaves lanceolate, oblong, pointed, finely toothed, glaucous, and downy beneath. Stipules half oval, then kidney-shaped. Aments cylindric. Ovary stalked, hairy. Style as long as the undivided stigmas.

Section 13.—Trees or low shrubs, with downy branches, and mostly ob-oval, grey, hoary, toothed, more or less wrinkled, and stipulate leaves, very veiny beneath. Ovary silky, downy.—(Sallows).

S. *cinérea* —Leaves ob-oval, elliptic, or approaching to lanceolate more or less glaucous above, pubescent and reticulated below with slightly recurved margins. Stipules semi-cordate. Ovaries stalked. Style short. Stigmas mostly entire.

S. *aquatíca*.—Stem and branches erect. Leaves slightly serrated, ob-oval, elliptic, slightly downy, flat, rather glaucous beneath. Stipules rounded, toothed. Ovaries silky, stalked. Stigmas nearly sessile.

S. *auríta*.—Leaves ob-oval, wrinkled, more or less pubescent, very downy beneath, tipped with a small bent point, recurved at the margins. Stipules roundish, semi-cordate. Ovary lanceolate, subulate, stalked, silky. Style very short.

S. *capréa*.—Leaves oval, elliptic, acute, serrated and waved at the margin, downy beneath. Stipules semi-cordate. Ovaries pedicelled, subulate, silky. Stigmas sessile, undivided.

The species of *Sálix* amount to one hundred and sixty-seven.

DIVISION B.

Perianth single.

Order XXII.—ULMA'CEÆ.

Perianth minute, usually toothed. Fruit a winged samara (a winged, single-seeded seed vessel). Leaves rough or rigid. Flowers in clusters.

ULMU'S.—Fruit compressed, one-seeded. Leaves doubly serrated, unequal at the base.

U. *campéstris*.—Leaves small, roundish in the middle, contracted at both ends, rough above, downy underneath. Young shoots downy.

U. *glábra*.—Leaves very rigid, glabrous above, not hairy below, more unequal at the base than *campéstris*, with blunter teeth. Petioles and young shoots not downy.

U. *túberósa*.—Leaves pointed, doubly and sharply serrated. Bark of the one-year-old shoots corky.

About Hampstead, &c.

U. *májor*.—Leaves bluntly serrated. Branches drooping and corky.

U. *montána*.—Leaves broadly elliptic, with an acuminated serrated point; larger than the leaves of the preceding species.

U. *glábra*, U. *montána*, with other species, native? or exotic? are growing in the Regent's Park, near the Albany road.

Order XXIII.—CHERATOPHYLLA'CEÆ.

Monœcious. Perianth many parted. Anthers numerous, sitting. Ovary one-celled. Ovule single, pendulous. Fruit a one-celled, one-seeded nut, terminated by the hardened stigma.

- Leaves many-cleft, floating.

CHERATO'PHYLLUM.—The only genus. Character the same as the order.

C. *demérsum.*—Fruit armed with three spines. Segments of the perianth notched at the extremity.

C. *submérsum.*—Fruit smooth. Segments of the perianth entire.

Both species grow or grew in ponds, behind Park Street, Camden Town, near Albany Road, Regent's Park.

Order XXIV.—URTICA'CEÆ.

Perianth of two to four pieces, or four to five cleft, or parted, persisting. Stamens inserted into the divisions or pieces. Fruit an achenium, (a hard pericarp with one seed), covered by the perianth. Seeds pendulous. Flowers in heads or in racemes.

URTI'CA.—Flowers monœcious or diœcious. Perianth of barren flowers in four pieces; of the fertile, two. Seeds shining.

U. *dioíca.*—Leaves cordate. Flowers in lax, branched, racemes.

On rubbish everywhere.

U. *uréns.*—Leaves elliptic, incised, or serrated, with small reflexed stipules. Flowers in simple compact racemes.

A very branchy plant of annual duration. On sandy fields, rubbish, &c.

U. *pilulífera.*—Fertile flowers, capitate.

On rubbish at Haverstock Hill, below Mr. Brown's Nursery, where the path to the cow-house joins the Hampstead Road.

This genus comprehends 114 species.

PARIETA'RIA.—Perianth four-cleft. Florets with an involucre.

P. *officinális.*—Leaves oval, on a branching reddish stem. A creeper on old walls.

Highgate, Hampstead, Shere Church, &c.

HU'MULUS.—Monœcious. Perianth of the barren flowers five-parted. Fertile, amentaceous, with large concave, entire scales.

H. *lúpulus.*—Stems long, twining, with rough, petioled, cordate leaves.

Hedges, Hendon, rare. Kent, Surrey, &c. in abundance.

Order XXV.—EUPHORBIA'CEÆ.

Perianth three to five parted, cleft or toothed. (In *Euphórbia* wanting.) Fruit a coccus, splitting into two or three; one or two seeded portions, (cocci.) Stamens one to twelve. Styles two to three.

EUPHO'RBIA.—Flowers destitute of a perianth, on a leafy involucre. Fruit splitting into three pieces, called cocci.

E. *péplus*.—Flowers in a three-rayed umbel, with oval or ob-oval bracts. Disk of florets crescent-shaped, glandular. Leaves ob-oval, petiolate.

E. *exígua*.—*Florescence as péplus. Bracts and leaves linear, lanceolate.*

Smaller plant than *péplus*. Common in corn fields.

E. *helioscópia*.—Umbel five-rayed. Bracts and leaves ob-oval, serrated.

Larger than *péplus*.

E. *láthyrus*.—Stem four-forked. Branches two-forked. Flowers in the bifurcations. Leaves in pairs, opposite, sessile, cordate at the base, and acuminate.

A weed in gardens. The author gathered it in Rockingham Forest, Northamptonshire. Between Wansford and King's Cliffe, far from dwellings or cultivated lands.

E. *platyphy'lla*, (*stricta* of some authors.) Stem upright, nearly leafless. The few upper leaves are sessile, lanceolate, elliptic. Umbels five branches. Branch-leaves or bracts deltoid, numerous. Fruit warted.

Cornfields within the angle formed by the road that branches off the London Road, two miles below Edenbridge, to Tunbridge, and the former road leading down towards Brighton. Eddells—Col. Woodhouse's.

Stricta indicates the habit of this plant better than *platyphy'lla*.

E. *parália*.—" Umbel of about five principal branches, often with inferior scattered ones. Bracts cordate, concave. Leaves coriaceous, ob-oval, and linear, lanceolate, (generally) imbricated, glaucous. Glands of the involucre five, lunate. Capsules wrinkled. Seeds smooth."

South Kent; within the path at Lydden Spout—Rev. G. E. Smith.
The species of *Euphórbia*, according to Sprengel, are 213.

E. *amygdaloídes*.—Umbel many-rayed. Involucres perfoliate. Leaves obtuse, hairy. Stem somewhat shrubby, tall, red.

Woods.

MERCURIA'LIS.—Diœcious. Perianth three-parted. Barren flowers nine to twelve stamens. Fertile flowers with two styles. Fruit splitting into two pieces.

M. *perénnis*.—Stem simple. Leaves rough. Flowers clustered on axillary peduncles.

M. *ánnua*.—Stamen branching. Leaves smooth. This species is some months later in flowering than *perénnis*.

Churchyard, Spafields Chapel. About Islington. Camden Town. Darent, Kent. Petersfield, Hants.

SANGUISORBA'CEÆ.

(See in Order *Rosáceæ*.)

Order XXVII.—ARISTOLOCHIA'CEÆ.

Overy inferior, three or six-celled. Perianth single, tubular.

ARISTOLO'CHIA.—*Limb of the coloured perianth dilated on one side. Stamens six. Stigma with six lobes.*

A. *clematítis.—Leaves cordate. Lip of corolla oblong, shortly acuminated.*

Hemswell, near Spittal, Lincolnshire, on a low wall in the village.

Order XXVIII.—CHENOPODIA'CEÆ.

Leaves simple, alternate, or opposite, without stipules. Perianth of three to four divisions, persisting, enclosing the fruit (one-seeded nuts). Stigma simple.

CHENOPO'DIUM.—Perianth five-parted. Stamens five. Styles two. Nut or seed one, covered by the five-angled closed perianth.

* Leaves entire.

C. *polyspérmum*?—Racemes on short peduncles. Leaves thin, somewhat oval, narrow at both ends, scarcely acute. Stem taper and prostrate. Flowers in compound, spreading, axillary clusters, leafless. Seeds shining black.

Gardens at Hendon.

C. *acutifólium*?—Racemes on long leafy branches. Lower with leaflets, upper without,—simple and whorled. Leaves acute, with prominent nerves, narrow at the base. Stem angular and sulcate. Many of the leaves are without any point. Racemes small, lower horizontal.

New Finchley Road, near Regent's Park.

C. *ólidum*—Stem prostrate, bearing small racemes. Leaves small, oval, slightly acuminate. Known by its strong fetid smell.

Hampstead, opposite Belsize Lodge. Near the Plough, Wandsworth.

C. *marítimum*.—Leaves awl-shaped, linear, fleshy. Stem very branchy.

Gravesend, &c.

* * Leaves toothed, sinuated or lobed.

C. *úrbicum*.—Stem with red lines. Leaves toothed, chiefly in the middle, triangular. Lobes at the base spreading. "Spikes long, upright, with remote small clusters. Seeds large."

C. *rúbrum*.—Leaves much toothed and sinuated, triangular, attenuated, and entire at the base. "Flowers crowded in compound, erect leafy spikes." "Seeds (fruit) very minute."

Curtis first published this distinctive mark.

C. *murále*.—Stem upright, much branched. Leaves thick, shining, deeply toothed. Teeth incurved. Racemes widely spread. More fleshy and shining than the two preceding species.

C. *álbum.—Stem branching, sometimes reddish. Leaves oval,* oblong, toothed, entire at the base. *Upper very entire, with*out teeth. Florescence in roundish, distant, clusters, on leafless branches.

Var. β. Leaves entire.

C. *ficifólium.*—Leaves with two erectish lobes at the base, and one or two blunt teeth above, long, narrow. Upper quite entire, almost linear. Flowering branches short and spreading, bearing roundish and somewhat leafy clusters. The stem has a purplish spot above the axils of the branches.

Among the earliest in flower of the genus (1st July).

C. *glaúcum.*—Stem thick, branchy, very leafy. Leaves long, narrow, toothed, and sinuate. Racemes small, leafless. Known from the other species by its narrower, more deeply sinuate leaves—all toothed.

C. *hy'bridum.*—Leaves large, cordate, angled, toothed, and acuminate. Racemes branching, spreading, leafless.

Lavender Hill Nursery—Mr. William Pamplin.

C. *botry'odes.*—Leaves triangular, broad. Stem red. Raceme clustered. Whole plant hoary, with white granules. Fleshy, with reddish flowers.

Beach, Mersea Island, Essex.

C. *bónus henrícus.*—Leaves triangular, waved, wrinkled, very powdery below. Racemes spicate.

Church Yard, Shere; Colchester, &c.

C. *álbum* grows in cornfields. The others, with the exception of the two last, on manure heaps, rubbish, &c. *Glaúcum* is abundant on waste ground behind Euston Square, St. Pancras.

ATRIPLEX.—Barren flowers, with a five-parted perianth. Fertile, with two pieces, inclosing the single compressed seed.

A. *pátula.*—Stem spreading and branched. Leaves on long petioles, angled, toothed, and sinuated. Upper leaves narrow, lanceolate, entire. Perianth of two large triangular pieces, enclosing a large seed.

A. *angustifólia.*—Stem like *patúla*, but more divergent. Leaves on shorter petioles, lanceolate, entire, spreading. Perianth of the seed lanceolate, hastate. Seed half the size of *pátula.*

A. *portulacoídes.*—Leaves hoary, spatulate, lanceolate. Lower part of the stem shrubby.

Var.—Leaves small, silvery below, oblanceolate, very fleshy.

A. *laciniáta.*—Pulverulent. Branches horizontal. Leaves glaucous, narrow, laciniate or toothed.

Colne. Thames. With the former species.

A. *littorális.*—"Stem erect. Leaves linear, entire or toothed. Perianth of the fruit sinuated and muricated at the back."

Salt Marshes east of Sandwich. About New Romney, &c.—Rev. G. E. Smith.

A. *pedunculáta.*—" Leaves ob-oval, lanceolate. Fertile flower cuneate, two horned, on long stalks."

Between Sandgate and Pegwell, frequent; also, between Pegwell and Sandwich—Rev. G. E. Smith.

BE'TA.—" *Perianth five-cleft, half inferior. Seed imbedded in* the fleshy base of the persistent perianth."

•B. *marítima.*—Leaves on long stalks, entire and curled. Spiklets axillary.

Shores of the Medway.

SALICO'RNIA.—" Perianth turbinate, fleshy, obscurely lobed. Style short. Stigma two and three cleft."

S. *herbácea.*—Branches horizontal. Joints compressed. Whole plant succulent.

Gravesend, &c.

S. *radícans.*—Stems woody at the base and upwards. Branches slender.

Colne, Colchester, and Wivenhoe.

SA'LSOLA.—Perianth five-parted, enveloping the fruit with its base, and crowning it with its broad scarious limbs.

S. *fruticósa.*—(*Chenopódium fruticósum*—Hooker).—Stems woody, procumbent. Branches erect, virgate, striated, covered with fleshy leaves.

S. *káli.*—Very diffuse; succulent. Stems reddish. Leaves prickly. Flowers axillary.

Both species—Colne, below Wivenhoe.

Order XXIX.—POLYGONA'CEÆ.

Perianth four to six parted, or of two to six pieces. Fruit a nut, usually triangular, often covered by the persisting perianth. A family of acidulous herbs, with sheathing leaves, revolute when young.

POLY'GONUM.—Perianths six-parted, coloured. Fruit a one-seeded triangular nut.

* Flowers in spikes.

P. *amphíbium.*—Spike dense, solitary, rose-coloured. Leaves petioled.

Var. *α* (*aquáticum*) Leaves broad, floating, glabrous. In rivers, &c.

Var. *β* (*terréstre*) Leaves rough, narrow. Meadows.

P. *persicária.*—Stalk with thick joints. Leaves lanceolate, spotted, with fringed stipules. Spikes obtuse, terminal and lateral, on smooth peduncles.

Waste and moist places.

P. *bistórta.*—Stem simple (*i. e.* without branches). Leaves oval. Spike dense, obtuse.

Meadows between Millhill and Idlestree (Ellstree), Herts. Meadows at Sutton, Shere, and near Wotton House.

P. *lapathifólium.*—Stem branchy and spreading. Leaves oval, lanceolate, glandular beneath. Stipules not fringed. Spikes of *flowers on rough peduncles.*

On rubbish.

Var. with a thick stem, spotted like a snake's belly. (*Persicária latifólia geniculáta, caúlibus maculátis.* Rand in Raii Synopsi, 145). Near Pond Street, Hampstead.

P. *hydrópiper.*—Spikes lax, filiform, drooping. Stem erect.

P. *mínus.*—Similar to *hydrópiper.* Spikes upright. Leaves linear, lanceolate. Stigma entire, in *hydrópiper* divided. Grows with the former, but less common.

Golder's Green, Hampstead; Mitcham Common: Chelsea, &c. Differs from the preceding species in its smaller size, in the procumbent rooting stem, and narrower leaves.

* * Flowers axillary. Panicles whorled.

P. *aviculáre.*—Stem spreading, branched. Leaves elliptic.

P. *fagopy'rum.*—Leaves cordate, arrow-shaped. Stem erect. Flowers in axillary, or in terminal panicles.

A weed in fields, where it is sometimes cultivated for the sake of the seeds, which are used in feeding poultry, game, &c.

P. *convólvulus.*—Leaves like *fagopy'rum.* Stem twining. Florescence whorled.

Fields.

This species has become the type of a new genus.

P. *oriéntale*, an exotic species, is sometimes found growing on rubbish near London and other places.

This genus comprehends 102 species.

RU'MEX.—Perianth of six uncoloured pieces. Styles three. Nut three-angled, acute, covered by the three inner pieces of the perianth.

R. *víridis.*—Pieces of the perianth long, narrow, not toothed. Leaves lanceolate, cordate at the base, slightly crisp at the margin. Racemes almost without leaves.

Var. *sanguíneus.*—Veins red. About the fourth mile stone on the Wandsworth Road—Mr. William Pamplin.

R. *críspus.*—Pieces of the perianth large, cordate, or oval, entire. Leaves lanceolate, waved and curled at the margin.

R. *praténsis.*—"Petals, (inner pieces of the perianth) enlarged, unequal, toothed at the base, with an entire triangular point, one chiefly tuberculated, (graniferous). Leaves oblong, lanceolate, wavy. Clusters of flowers nearly leafless, indistinct whorls."

Roadsides about the northern outskirts of London—Mr. Sowerby in Hooker's Flora. "Leaves broader, and less curled than in *crispus.* Racemes less crowded."

R. *acútus.*—Pieces of perianth toothed. Flowers in whorled or alternate racemes, with a leaf underneath each whorl or cluster. Leaves cordate, lanceolate.

R. *obtusifólius.*—Leaves cordate, not sharp pointed. Stem rough. Perianth large, toothed.

R. *púlcher*.—Root leaves smooth, slightly fiddle-shaped. Stem smooth, spreading. Lower whorls leafy. Segments of the perianth entire, oblong, one bearing a bright red grain. Some *of the others partially graniferous.*

R. palústris.—Leaves linear, lanceolate, elegant, quite entire, flat, not crisp, quite smooth; yellowish green. Valves lanceolate, toothed at the base, graniferous.

Sea coast, Essex; not rare.

R. *hydrolápathum*.—Leaves very long, lanceolate, slightly crisp, glaucous green.

The largest species of British Docks. The leaves, with their foot-stalks, are sometimes from two to three feet long.

Ponds and ditches.

R. *acetósa*.—Leaves not wrinkled, arrow-shaped at the base. Perianth graniferous.

R. *acetosélla*.—Leaves hastate. Perianth without grains.

Upland Pastures.

Sprengel describes ninety-seven species of *Rúmex*.

Order XXX.—SANTALA'CEÆ.

Perianth four and five cleft. Stamens opposite, and equal to, the segments, and growing out of their bases. Ovary one-celled, with one to four ovules fixed to the top of a central placenta.

A small order of trees, shrubs, and herbaceous plants.

THE'SIUM.—Seed one, covered by the indurated calyx (perianth), which is five-cleft and bears the five stamens.

T. *linophy'llum*.—Florescence spicate. Florets on horizontal pedicels, bracteate. Leaves linear, lanceolate. A smooth, rigid, prostrate plant, with greenish florets.

Sanderstead and Purley Downs. Ranmer Common.

Order XXXI.—ELÆAGNA'CEÆ.

Ovule one-celled, with a solitary ovule. Fruit enclosed by the succulent calyx. Shrubs or trees, with entire, exstipulate leaves and axillary flowers.

HI'PPOPHÆ.—"Flowers diœcious. Barren flowers, with a perianth of two roundish valves, collected into a kind of catkin (ament.) Fertile flowers, with a tubular perianth cloven at the top. Fruit a one-seeded nut, surrounded by the fleshy calyx.

H. *rhamnoídes*.—Shrub thorny. Leaves linear, lanceolate, silvery. Berry orange.

Below the Church at Folkstone, on the Green Sand; upon the Chalk, at Lydden Spout; upon sand, east of Deal—Rev. G. E. Smith.

Order XXXII.—THYMELIA'CEÆ.

Perianth regular, tubular, four-cleft. Ovary superior, one-celled. Fruit a one-seeded nut, slightly fleshy on the outside.

DA'PHNE.—Stamens eight. Style short.

D. *lauréola.*—*Florescence a cluster of about five greenish florets. Leaves crowded at the top of the stem, ever-green, lanceolate.*

Woods, not rare.

D. *mezéreon.*—Flowers sessile, lateral, pink, appearing before the leaves, which are lanceolate and deciduous.

In a Wood, about three miles from Petersfield, near Oakley. In Selbourne Hanger Wood, in the times of the Rev. Gilbert White.

DIVISION C.

Perianth double. Corolla monopetalous.

SECTION A.

Ovary superior.

Sub-Section 1.—Stamens fewer than five.

Order XXXIII.—PLANTAGINA'CEÆ.(PLANTAGINEÆ.)

Flowers in cylindric, ovate, or globular spikes. Calyx four-parted, or of four sepals (pieces). Corolla four-cleft, tubular, and scarious. Fruit a two and four-celled pyx (capsule with a lid), with one seed or many.

PLANTA'GO.—British Species.—Flowers on a round, tapering scape. Leaves all radical, nervous.

P. *májor.*—Leaves large, oval, usually smooth. Several seeds in each cell.

P. *média.*—Leaves hoary. Smaller than *májor.*

P. *lanceoláta.*—Scape angular. Leaves long, lanceolate.

P. *corónopus.*—Leaves pinnatifid.

P. *marítima.*—Leaves linear, fleshy.

One hundred and sixteen species are enumerated by Sprengel.

LITTORE'LLA.—" Monœcious. Barren flowers, with four sepals and a four-cleft corolla, and four very long stamens. Fertile flowers, with an urceolate corolla, contracted at the mouth. Capsule one-seeded.

L. *lacústris.*—Leaves radical, fleshy, semi-cylindric, two to three inches high. Barren flowers solitary, upon a scape. Fertile flowers sessile. Ovary oblong. Style very long.

Wandsworth Common, or Wimbledon. Ponds about Cobham, Surrey; very common.

Order XXXIV.—PLUMBAGI'NACEÆ.*

Calyx plaited. Corolla regular. Stamens five. Ovary simple. Ovule ditto. Fruit a utricle. Leaves slightly sheathing.

ARME'RIA.—(*Státice*—Hooker.)—Calyx disepalous (monosepalous, Hooker) plaited membranous. Monopetalous by the coherence of the petals which are stameniferous. Calyx investing the one-seeded capsule.

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* Placed in this sub-section on account of its affinity to the preceding Order.

A. *vulgáris.*—(Lindley.)—Leaves all radical linear. Florescence *capitate on a rounded scape.*

Banks of the Thames, below Woolwich.

STA'TICE.—Differs from *Arméria* in its panicled or spiked florescence and branchy habit.

S. *limónium.*—Leaves stalked, single ribbed mucronate. Calyx with deep acute plaited segments and intermediate teeth.

Muddy Shores of the Thames, Medway, &c.

S. *spatuláta.*—Leaves three-nerved at base, spatulate. Calyx with blunt segments, and without intermediate teeth.

Coast of Kent, in several places—The Rev. G. E. Smith, who distinguished this plant from S. *limónium.*

Order XXXV.—OROBANCHA'CEÆ.—(OROBANCHEÆ.)

Flowers bracteate. Corolla irregular. Ovary one-celled, with many ovules, attached to two parietal trophosperms (seed cords.)

OROBA'NCHE.—Calyx of two segments. Corolla irregular. Leafless plants with scaly stems, and spiked florescence.

O. *májor.*—Upper lip of the corolla undivided. Lower three-cleft. Stamens glabrous. Style downy.

Grows on broom and furze. On commons, woods, and waste places.

O. *elátior*—Slenderer than O. *májor.* Differs not from *minor* except in being considerably taller, and bearing more flowers.

Old pits, and about the borders of fields.

A deep yellow flower variety of either *elátior* or *mínor*, in a field between Sutton (Shere) and the hills.

O. *mínor.*— Style smooth. Much smaller than *májor.*

Grows on clover in fields. Mitcham, Albury, &c.; plentiful.

LATHRE'A.—Calyx campunulate, four-cleft. Corolla tubular, two-lipped, upper concave. Ovary, with two spongy placentæ in the middle of each valve.

L. *squamária.*—Flowers pendulous. Lower lip of corolla trifid. Stem simple, leafless, covered with white fleshy scales.

In deep shady woods.

A variety found by the Rev. G. E. Smith, at Lyminge, Kent, with an almost entire upper lip, and lanceolate (not oval) bracts.

Order XXXVI.—SCROPHULARA'CEÆ.—(SCROPHULARINEÆ).

Ovary two-celled. Fruit capsular, two to four valved, many-seeded, with a central trophosperm. Leaves usually opposite.

* Corolla nearly regular, rotate.

VERBA'SCUM.—Corolla of five obtuse lobes. Fruit a two-valved capsule. Stamens declining.

V. *thápsus.*—Leaves decurrent, woolly on both sides. Stem unbranched. Flowers on a long spike.

A variety, with a branching stem. Several spikes growing from and below the base of the central and largest.

Hills between Byfleet and Cobham, Surrey. In other parts not rare.

V. *thapsoídes.*—Stem virgate, unbranched. Leaves oval, elliptic, serrated, woolly like *thápsus,* sessile, (lower petiolate) decurrent. Florescence in a spicate panicle. Flowers not sessile as in *thápsus,* nor so lax as in *nígrum.* Stamens hairy. Anthers red or orange.

About St. Martha's Hill, Guildford, and Albury.

The author recognised this plant as different from V. *thápsus,* and V. *nígrum,* above ten years ago.

V. *nígrum.* — Leaves cordate, acuminate, undulated, serrated. Spike lax, sub-panicled. Flowers yellow. Anthers violet.

Var. proliferous. Segments of calyx very minute. Petals leafy. Instead of the ovary there grows a slender branch bearing numerous similar florets. Plant very branchy.

Smitham Bottom, Godstone Road, four miles from Croydon.

V. *nígrum* has frequently a very branchy florescence, *i. e.* stem separating at the top into several branches.

V. *lychnítis.*—Flowers in branchy panicles, three to four together, white, with crocus-coloured anthers. Leaves about sessile, crenate, hoary below.

Smitham Bottom, rare. Farnborough, and Green-Street Green, Kent, &c., common.

V. *blatária.*—Leaves amplexicaule, smooth, wrinkled, and serrated. Flowers pedicelled.

Among rubbish on Hampstead Heath—an outcast. Shooter's Hill, Kent.

VERO'NICA.—Limb of the corolla spreading, four-parted. Lower segment narrower than the rest. Capsule divisible into two parts.

* Flowers clustered or spicate, perennial.

V. *serpyllifólia.*—Flowers spiked and terminal. Leaves oval, small, crenulate. Plant upright, four to six inches high. Spikes in clusters, axillary.

V. *scutelláta.*—Clusters alternate. Leaves linear, slightly toothed.

Lonesome house, near Leith Hill, &c.

V. *anagállis*—Clusters opposite. Leaves lanceolate, serrated. Stem erect.

V. *beccabúnga.*—Racemes opposite. Leaves elliptic, blunt. Stem creeping.

These four species have smooth leaves.

The three latter grow in water, or watery places.

V. *officinális.*—Leaves oval, rough. Stem procumbent. Spike lateral, solitary, erect.

V. *montána.*—Leaves oval, rough. Stem procumbent. Racemes few, flowered.

In woods, Hampstead, &c.; not rare. Albury Park.

V. *chamæ'drys.*—Flowers larger, in lax, opposite racemes. Leaves sitting, oval, deeply serrated.

* * Flowers solitary, annual.

V. *arvénsis.*—Stem erect, four to six inches. Flowers sitting in the axils of lanceolate bracts; forming a leafy spike.

V. *agréstis.*—Stem procumbent. Leaves oval, widely serrated. Flower pedunculated.

On rubbish, &c.

V. *buxbáumii.*—Sepals and lobes of the capsule, very divergent. V. *agréstris* has a more turgid, less divergent capsule, and a shorter style. The chief difference is in the flower, which is more than twice as large as the flower of *agréstis,* and on a longer pedicel.

Very common about Albury and Shere, in fields and gardens. At Colchester, under a grassy bank, growing on the turf.

V. *vérna!*—Leaves cordate oval, incised at the base, with two to four lobes, lower petioled, upper nearly sessile. Stem ascending, simple. Florescence spicate; lower florets on short pedicels, upper sessile. Sepals large, lanceolate. Capsules flattish, broadly cordate, hairy and ciliated, some corrugated. Spike more lax than in *arvénsis,* not so rigid. Lower florets shortly pedicelled. Capsule hairy.

In a common field at Shere, between the carpenter's shop and the Shere entrance to Albury Park; scarce. I have a plant of V. *vérna* from Bury St. Edmunds, sent by Mr. Pamplin, not above two inches high. The Shere specimen is about six. They agree in the size of the florets, hairiness of the capsule, incised leaves, &c.

A field below the warren of Albury Park.

V. *hederifólia.*—Leaves cordate, three to five lobed.

The four latter species grow on cornfields. The former, (*arvénsis*) on walls and banks.

136 *Verónicas* are known.

LIMOSE'LLA.—Calyx and corolla five-cleft, with equal segments. Capsule one to two celled.

L. *aquática.*—Leaves spatulate. Flowers very minute, axillary, and pedunculated.

Hampstead Heath, in several parts between the Castle and Spaniards, north side of the road.

* * Corolla irregular, two-lipped, throat open.

RHI'NANTHUS.—Calyx four-cleft, inflated. Upper lip of the corolla compressed. Capsule compressed, obtuse; seeds flattened.

R. *crísta gálli.*—Upper lip of corolla arched. Leaves lanceolate, and serrated. Calyx glabrous.

R. *májor.*—"Spikes of flowers denser and more bushy. Bracts yellow, terminated by an elongated green point. Ovary narrower, and more turgid than in *crísta gálli.* Style prominent, nectary heart-shaped, more spreading and greenish."

Cornfiel[illegible] on the Cliff, parish of Hemswell, near Spittal, Lincolnshi[illegible] The differential character is from Hooker's Flora.

BA'RTSIA.—Calyx four-cleft, coloured. Upper lip of the corolla long, entire, and concave. Seeds angular.

B. *odontítes.*—Flowers in unilateral racemes. Leaves lanceolate. Stem branched.

EUPHRA'SIA.—Calyx cylindric, four-cleft. Upper lip of corolla two-cleft. Lower lip three-cleft, with (bifid) two-cleft lobes.

E. *officinális*.—Leaves oval, deeply serrated, or toothed.

PEDICULA'RIS.—Calyx two to five cleft. Upper lip of corolla arched and compressed. Lower lip flat, three-lobed.

P. *sylvática*.—Stems spreading, very short. Calyx angular and glabrous.

P. *palústris*.—Stem upright, branching. Leaves petioled, bipinnatifid. Calyx hairy and ribbed.

Great Bog, Hampstead, sparingly. Near Roehampton. Hackbridge, Carshalton. Bogs about Albury and Shere.

Number of species, 57.

DIGITA'LIS.—Calyx five-parted. Corolla bell-shaped, inflated, five-lobed. Capsule ovate.

D. *purpúrea*.—Leaves oval, crenate, downy.

SCROPHULA'RIA.—Calyx five-cleft. Corolla globose. Lips short; upper one reflexed, two-lobed; lower three-lobed.

S. *nodósa*.—Leaves acute. Stem four-angled.

S. *aquática*.—Leaves obtuse. Stem with four-winged angles.

S. *vernális*.—Leaves cordate, often ternate. Peduncles dichotomous. Flowers yellow.

Railway between Mitcham and Merton—Rev. W. Bree in Magazine of Natural History. Mr. William Pamplin gathered a plant in the same locality, 1837.

* * * Throat closed by the lip.

ANTIRRHI'NUM.—Calyx of five sepals. Upper lip of corolla two-cleft, reflexed. Lower lip three-cleft.

A. *május*.—Leaves lanceolate. Flowers inflated, large. Florescence spicate.

A. *oróntium*.—Leaves elliptic, lanceolate. Sepals leafy, large, lanceolate, longer than the pink striated corolla.

Potato field, Shere; Rubbish near Albury Park farm-yard; Bromley, Kent, &c.

LINA'RIA.—Calyx five-parted. Corolla spurred.

L. *vúlgaris*.—Leaves linear, lanceolate, crowded. Flowers in terminal, imbricated spikes.

Hedges and banks.

L. *répens*.—Leaves like L. *vulgáris*, narrower and paler. Florescence a longish, lax panicle. Spur shorter than in *vulgáris*. Florets on long filiform pedicels.

Road-side, near Rake, about half-way between Petersfield and Liphook. Banks between Godalming and Mousehill. Streatly, Berks; and Henley, Oxfordshire—Mr. William Pamplin.

Near Southampton in great plenty—Mr. William Pamplin.

L. *purpúrea*.—May be readily distinguished from both by its more leafy stem, its branching spicate florescence, and by its purple and smaller florets.

Not yet adopted as a British species; it grows about Hampstead and Beckenham, on walls. It was gathered also at Rake, Hampshire, growing among weeds and officinal plants, at Mr. Hobbs' the herbarist.

L. *mínor.*—Leaves oblanceolate. Plant viscid and hairy. Six or eight inches.

Sandy fields, not rare.

L. *elátine.*—Stems filiform, diffuse, prostrate. Pedicels filiform and horizontal, longer than the leaves. Flowers yellow and violet, with a long setaceous spur. Leaves sagittate.

L. *spúria.*—Habit as *elátine.* Leaves roundish. Whole plant woolly. Sepals lax. Upper lip of corolla deep violet.

L. *cymbalária.*—Stems procumbent, usually on walls. Leaves cordate, five-lobed, shining. Flowers blue.

On old walls, Hampstead, Highgate, Ealing, Croydon, &c., not rare. Guildford, Albury, Shere, &c.

The *Linárias* amount to ninety-three according to Sprengel.

MELAMPY'RUM.—Lower lip three-toothed, with a prominent palate. Upper lip notched, arched and compressed at the margin. Seeds two.

M. *praténse.*—Flowers in pairs, axillary, and opposite. Branches bracheate. Leaves long and narrow. Upper toothed at the base.

Woods.

M. *cristátum.*—Spikes four-angled, with imbricate, compact, denticulate bracts.

Wood, near Saffron Walden; and ditto, near Boroden, Northamptonshire.

Order XXXVII.—LENTIBULA'CEÆ.

Calyx parted, or disepalous. Corolla irregular, including the two stamens. Ovary one-celled, with a very short style, and a central placenta, bearing many ovules. Marsh or aquatic plants, with radical leaves, and flower bearing (usually scaly) scapes.

PINGUI'CULA.—Corolla ringent, spurred. Calyx five-cleft.

P. *vulgáris.*—Spur cylindric, pointed, as long as the petal. Capsule ovate. Leaves radical, yellow, smooth, unctuous.

Southorpe Bog, Northamptonshire. Wing, near Aylesbury; also Titchborne, Hants—Mr. William Pamplin.

UTRICULA'RIA.—Similar to *pinguícula,* differing in having a disepalous calyx.

U. *vulgáris.*—Spur or horn of the corolla conical. Plant immersed in the water, very branchy, bearing a few-flowered scape. Flowers large, bright yellow.

U. *mínor.*—Spur very short, blunt. Flowers small, orange, a smaller and tenderer plant.

Holme Fen, Hunts, produces both species; also Scotton Common, Lincolnshire.

Order XXXVIII.—LABIA'TÆ.

Calyx tubular, toothed or cleft. Corolla tubular, irregular. Ovary four-lobed, four-celled, one ovule in each. Fruit four-achenia. Stem four-angled, leaves opposite.

* Corolla almost regular, four-cleft.

LY'COPUS.—Upper segment of the corolla broader than the others, notched. Stamens two.

L. *europæ'us.*—Leaves deeply serrated and sinuated.

In moist and watery places, common.

ME'NTHA.—Calyx five-toothed. Corolla regular, four-cleft; tube short. Stamens distant, exserted, or included.

M. *sylvéstris.*—Lower leaves quite smooth, rotund, cordate; upper cordate and oval, serrate or dentate, hoary. Stems reddish, with reflex hairs. Florescence spiked and capitate. Corolla including the stamens.

Near Whitehouse, Croydon.

M. *rotundifólia?*—Leaves elliptic, widely serrated with forward teeth, sessile. Florescence in dense verticils. Flowers violet, on longish purplish hairy pedicels. Stamens longer than the corolla. Whole plant hairy and light green.

M. *víridis.*—Leaves sessile, elliptic, lanceolate, rugose, rather widely serrated with upright teeth. Florescence spicate, sometimes branching.

Road side, between Reigate Common and Buckland, rare. At Selborne, Hants, there is a very woolly hoary variety, not rare.

M. *hirsúta.*—Leaves oval, somewhat cordate, petioled. Flowers capitate and verticillated. Calyx rough. Pedicels rough, with retrorse hairs.

M. *acutifólia.*—Colour a light green. Florescence verticillated. Leaves acute at both ends. Calyx and pedicels very hairy. Corolla including the stamens.

Hackbridge, Carshalton.

M. *rúbra?*—Leaves acute, mucronate, serrated, with upright teeth. Flowers verticilled and capitate, conspicuous, rosy. Stamens longer than the corolla. Plant hairy, especially about the joints.

Watery places, Lingfield, Sussex. Beckenham, Kent, &c.

M. *arvénsis.*—Leaves oval. Stem branchy and upright.

This species is easily known from the other Mints, by its locality,—corn fields; and also from the preceding species by its smaller size.

M. *agréstis.*—Leaves cordate, crenated, rugose, sessile, broad. Florescence spicate. More woolly than most of the Mints.

Albury Park; pastures between the garden and the lake.

If this be the *Méntha* of the English Flora described as *agréstis* by Sir J. E. Smith, the author desires to direct the attention of botanists to the two species—*arvénsis* and *agréstis:* he does not know two British Mints more distinct than these two in question.

M. *pulégium.*—Leaves small, elliptic, obtuse, sessile. Stems prostrate. Florescence verticilled. Flowers purplish. Stamens longer than the corolla.

Known from the other Mints by its small leaves, prostrate habit, and especially by its strong smell.

Lower Ponds, Hampstead Heath; Chriselhurst Common; Mitcham Common; Warlingham Common; Reigate, ditto. Usually growing where water has lodged during winter; about the margins of pools and watering ponds.

Corolla without an upper lip, or a very small one.

TEU'CRIUM.—Tube cleft at the back. Lip three-lobed, projecting. Middle lobe the largest. Stamens projecting through the cleft tube of the corolla.

T. *scorodónia.*—Leaves cordate, petiolate, crenate. Flowers in lateral and terminal clusters.

Woods, heaths, &c.

T. *chamæ'drys.*—Leaves oval, incised and serrated. Flowers axillary in threes, reddish-purple, large, handsome.

Winchelsea Castle; Sherrard—The Rev. G. E. Smith.

This genus contains seventy-nine species.

A'JUGA.—Middle lobe of the projecting lip ob-cordate. Back of the tube notched.

A. *réptans.*—Stoloniferous (bearing shoots). Verticils of flowers forming a dense leafy spike.

A. *chamæ'pitys.*—Florets sessile, axillary. Leaves sessile, three-parted or four-parted, segments linear, long. Stems leafy, hairy, four to six inches high.

* * * Upper lip erect, flat, or nearly so.

GLECHO'MA.—Upper lip bifid. Middle lobe of lower lip notched.

G. *hederácea.*—Leaves kidney-shaped. Stems prostrate.

BETO'NICA.—Upper lip entire. Tube of corolla cylindric.

B. *officinális.*—Flowers in leafy, long, interrupted spikes.

MARRU'BIUM.—Upper lip linear, cleft.

M. *vulgáre.*—Stem and leaves hoary, clothed with fine shaggy down. Calyx striated, with ten setaceous rigid hooked teeth. Flowers in thick clusters, sessile.

Grinstead Green, Kent. Chingford, Essex—Mr. William Pamplin.

THY'MUS.—Corolla two-lipped; upper notched; lower large. Calyx closed with hairs at the mouth.

T. *serpy'llum.*—Flowers in roundish spikes or heads.

The species of Thymus amount to fifty-four.

A'CINOS.—Calyx urceolate, striated, hairy. Three upper teeth spreading, two lower erect. Tube of corolla contracted. Upper lip slightly reflexed; lower horizontal.

A. *vulgáris.*—Leaves elliptic, tapering at both ends, on short petioles. Stems prostrate or ascending. Whole plant hairy.

A variety with white flowers—Near Beggar's Bush, Croydon.

CALAMI'NTHA.—Calyx striated, gibbous near the base. After flowering, the throat seems closed with hairs. Upper lip of corolla notched, lower trifid, with an entire middle segment.

C. *vulgáris.*—Stem woolly. Leaves on short petioles, oval, crenated, or widely serrated. Flowers rosy.

C. *nèpeta*—Flowers large, pale rose. Throat spotted with white. Florescence fascicled on shortish foot-stalks. Leaves petioled, roundish, oval, pointed, widely serrated.

May be known from C. *vulgáris* by its strong smell of *Méntha pulégium* (Penny Royal), and by the truss of florets being on an axillary peduncle.

CLINOPO'DIUM.—This genus differs but slightly from *Calamíntha.* The upper lip of the corolla is rather more concave. The most obvious difference is in the larger and more numerous bracts with which the truss of florets is surrounded.

C. *vulgáre.*—Leaves with long shallow serratures and rather short petioles. Florescence whorled in dense tufts, axillary and terminal.

It approaches so near *Calamíntha vulgáris,* as to seem rather a variety of that plant than another genus.

MELI'SSA.—Calyx striated, ringent, two-lipped. Lower segment more deeply cleft, with longer teeth; upper with shorter and more spreading teeth.

M. *officinális.*—Florets both on simple and compound peduncles. Leaves petioled, oval, acuminate, serrated, with wide roundish pointed teeth.

Under a hedge outside of Brambletye Castle ditch, and under a stone wall close to Betchworth Mill, on the left of the path through the fields to Dorking; naturalized in both places.

NE'PETA.—"Calyx urceolate, striated. Lower lip of corolla lobed, mid-lobe crenated. Edge of throat reflex."

N. *catária.*—Leaves petioled, cordate, serrated, with broad and sharp teeth. Several florets from the short branching peduncle.

Roadside, near Wandsworth—Mr. William Pamplin. Field near Merrow Downs.

ORI'GANUM.—Upper lip notched. Lower three-lobed, erect, or nearly so. Calyx with five equal teeth, bracteate.

O. *vulgáre.*—Flowers panicled, bracts oval. Leaves oval, entire.

Downs, common, especially about chalk pits.

A variety with pure white flowers and uncoloured bracts.

Another variety, with similar bracts, and flowers of a pale rose-colour.

**** Upper lip concave, or arched, or both.

LA'MIUM.—Lower lip two-lobed. Tube inflated at the throat, with a tooth at each side. Upper lip concave.

L. *maculátum.*—Leaves pale green, white about the mid-rib, deeply serrated. Flowers large, rose-coloured, with a keeled tube.

On a bank near Lexden, Colchester, apparently naturalized.

L. *álbum.*—Helmet (upper lip of corolla) large, downy. Tube of the calyx brownish black on the outside. Leaves cordate, acuminate, petioled. Flowers white.

L. *purpúreum.*—Leaves cordate, obtuse, petiolated. Upper crowded, somewhat lobed rather than serrated. Tube of corolla hairy at the base. Lower lip of corolla spotted.

Var. with a pure white flower, near Donyland, Essex.

L. *incísum.*—Tube of corolla longer, with a rose-coloured downy helmet. Leaves revolute, half smaller than in *purpúreum,* incised. In habit between *purpúreum* and *amplexicaúle.*

L. *amplexicaúle.*—More rigid than the other species. Upper leaves more crowded and sitting. Florets with a very long tube. Beautiful rose colour.

GALEO'BDOLON.—Lower lip three-cleft, lobes acute. Throat not toothed as in *Lámium.* Calyx wide.

G. *lúteum.*—Flowers yellow, with linear verticilled bracts.

Common about London ; rare in the Northern parts.

GALEO'PSIS.—Upper lip concave, crenate. Lower in three unequal lobes, with two teeth above.

G. *tétrahit.*—Stem hispid, thickened below the joints. Leaves oval, hispid, serrated. Upper lip nearly flat. Flowers usually purplish.

A variety near Ranmer Common, with pure white flowers.

The white flowered variety is common in the North-east of Scotland.

G. *ládanum.*—Stems rigid, wiry, upright. Leaves linear, lanceolate, widely serrated. Branches brachiate, alternate. Calyx teeth prickly. Corolla pink or rose. Throat marked white. A showy plant.

A var. with white flowers, near Chipstead.

G. *versícolor.*—Similar in habit and appearance to *tétrahit,* only much larger. Corolla thrice as long as the calyx, with a more concave upper lip. Flowers yellow, marked with violet.

Sandy corn fields, and corn fields in fenny tracts. Lincoln Fen, &c.

The author gathered it between Frensham and Oakhanger in Hants.

STA'CHYS.—Lower lip three-cleft; lateral lobes reflexed; upper lip concave.

S. *sylvática.*—Whorls of six flowers. Lower racemes pedunculate; upper sessile. Spikes very long. Leaves cordate, oval, acute, petioled.

S. *palústris.*—Leaves linear, lanceolate, semi-amplexicaule, with ascending teeth. Calyx wide at the mouth, ciliated. Upper lip of corolla entire. Lower trifid. Mid lobe crenate, marked with white. Whitish below.

S. *arvénsis.*—Stems weak. Leaves cordate at the base, on very short petioles, finely crenated or serrated, hairy. Calyx very wide, teeth spreading.

Fields.

S. *ánnua.*—" Annual erect, downy. Leaves oblong, lanceolate, rather acute, crenate, serrate, three-nerved, the lower ones stalked. Whorls of about six flowers, spicate. Calyx hairy; its segments subulate. Seeds roundish, glossy."

Hooker in English Botany, Supplement plate, 2669.

Field between Gad's Hill and Rochester—Jos. Woods, Esq.—Hooker's Flora.

BA'LLOTA.—Upper lip concave, notched. Calyx ten-ribbed, five-toothed, enlarged at the throat, plicate. Flowers in clusters.

B. *nígra.*—Stem strong, erect. Leaves oval, serrated. Flowers in racemes of five to six, with setaceous bracts.

Var. β. *alba,* with white flowers. Battersea, Chelsea, and Darenth, Kent.—Mr. William Pamplin.

PRUNE'LLA.—Upper lip of the calyx with three teeth. Lower two-cleft.

P. *vulgáris.*—Leaves oval, petioled. Spikes terminal, with two leaves at the base.

The variety with white flowers is occasionally met with on Hampstead Heath; Scotton Heath, Lincolnshire—not uncommon. Mr. Brown, of Haverstock Hill Nursery, is the author of this locality.

SA'LVIA.—Calyx bilabiate. Corolla with the upper lip divaricate, compressed. Stamens two, with two barren branches.

S. *praténsis*—Leaves oval, oblong, crenated. Corolla thrice as long as the calyx. Bracts very small.

About Cobham Park—Mr. William Pamplin.

S. *verbenáca.*—Leaves sinuated and serrated. Corolla narrower than the calyx, about equal to it in length.

About Shere. Colchester, on the old wall. Charlton, Kent, &c. The genus *Sálvia* consists of one hundred and eighty-six species.

Order XXXIX.—VERBENA'CEÆ.

Calyx tubular. Corolla tubular, somewhat irregular. Ovary two or four-celled, one or two ovules in each. Fruit usually a drupe or berry; seldom capsular.

VERBE'NA.—Calyx five-cleft. Corolla tubular. Limb five-cleft, unequal. Seeds four.

V. *officinális.*—Flowers in long spikes. Leaves cut. Stem erect.

The species of *Verbéna* exceed forty.

Order XL.—OLEA'CEÆ.

Calyx minute. Corolla regular, four-cleft. Stamens two. Ovary two-celled, with pendent ovules.

FRA'XINUS.—Capsule two-celled, two-seeded. Destitute of corolla.

F. *excélsior.*—Leaves pinnated. Leaflets lanceolate, acuminate, serrated.

LIGU'STRUM. Calyx minute. Corolla with a short tube and a four-cleft limb. Fruit a one-celled two and four-seeded berry.

L. *vulgáre.*—Leaves elliptic, lanceolate. Flowers panicled.

Sub-Section 2.—Stamens five or more.

Order XLI.—BORAGINA'CEÆ.—(BORAGINEÆ).

Ovary four-lobed, four-celled. One ovule in each. Fruit four one-seeded carpels, either separating into four distinct pieces, or having them concrete.

BORA'GO.—Corolla rotate, toothed at the orifice.

B. *officinális.*—Lower leaves oboval. Segments of corolla spreading, acute.

LYCO'PSIS. — Corolla funnel-shaped, with a crooked tube. Throat closed with scales.

L. *arvénsis.*—Leaves toothed, very hispid.

ASPERU'GO.—Corolla funnel-shaped. Orifice closed by scales. Calyx irregular. Lobes sinuated.

A. *procúmbens.* — Stem very rough, procumbent or climbing. Flowers axillary, small, blue.

Near Purfleet—Dickson.

I had, some years ago, a locality for this plant, somewhere on the Essex side of London, from a gentleman who lived at Boxmoor, Hemel Hemsted.

Purfleet—Mr. Alchorne. (Hooker's Flora).

SY'MPHYTUM.—Corolla inflated. Limb erectish. Throat closed with awl-shaped scales, rather longer than the anthers.

S. *officinále.*—Leaves oval, lanceolate, decurrent, rough. Stem winged.

Banks of rivers and ditches. Not rare.

S. *tuberósum.*—Lower leaves only slightly decurrent, upper opposite, petioled.

Much rarer than C. *officinále.*

Byfleet and Weybridge, by the river Wey.

Not rare in Scotland—Dr. Murray.

CYNOGLO'SSUM. — Corolla funnel-shaped. Tube short. Throat closed with scales.

C. *officinále.*—Leaves broad, lanceolate. Corolla reddish. A very soft and fetid plant.

Under hedges. Not rare.

C. *sylváticum.*— Leaves spatulate, lanceolate, shining, rough. Flowers blue. A hairy inodorous plant.

About Woodford Bridge, Chigwell, &c. Common in various parts of Hainault Forest, Essex.

LITHOSPE'RMUM.—Corolla funnel-shaped. Throat naked. Calyx deeply five-parted.

L. *arvénse.*—Flowers white. Leaves *Myosotis*-like. Seeds rough. Calyx longer than the corolla.

Corn fields.

L. *officinále.*—Seeds (nuts) smooth. Leaves lanceolate.

Chalky woods and banks. Holwood, Kent; Gatton, Surrey.

The beautiful L. *marítimum* (*Pulmonária marítima*), was seen by the author on the shore of Itchen Ferry, Southampton, twelve years ago.

It is not uncommon on the sandy shore of the bay of Stonehaven.

L. *purpúreo-cærúleum.*—Corolla longer than the calyx. Flowers violet.

Woods about Greenhithe, Kent—Botanists' Guide.

MYOSO'TIS.—Corolla with a spreading limb and very short tube, closed with small approaching scales.

M. *palústris.*—Calyx short, glabrous. Corolla large, blue and pink colour. Racemes lax. Leaves large, slightly hairy.

M. *secúnda.*—(*Murray*)—Distinct from *palústris* in its hairy calyx. Unilateral florescence. Longer peduncles, horizontal and drooping. Larger flowers. A larger plant. The hairiness is not constant.

These two species, *palústris* and *secúnda*, are to be distinguished not only by the larger size, and greater hairiness, and much larger flowers of *secúnda*, but, as Dr. Murray observes, by the somewhat drooping calyces when in fruit. The calyx of *palústris* is more ringent and larger toothed than *secúnda*.

M. *cæspitósa.*—Corolla scarcely exceeding the calyx, which is furnished with a few whitish straight appressed bristles, deeply cleft.

Great Bog, Hampstead Heath, &c.

M. *intermédia?*—Flowers larger than those of *arvénsis*. Racemes aphyllous. Leaves pale green, very hairy. Stem decumbent Plant tall and robust.

Fields about Colchester. If not perennial, at least biennial.

M. *sylvática?*—Nearly two feet high. Flowering spikes six to nine inches. Calyces ovate, prickly, with incurved hooks.

M. *arvénsis.*—Has nearly the same characters, but is smaller, especially the corolla.

M. *cóllina.*—"Stem short. Flowers all blue. Calyx, when the plant is in fruit, open, and about the same length as its stalk."—(Murray).

Shere heath, Colchester, &c.

M. *versícolor.*—"Stem higher than in *cóllina.* Flowers yellow, changing into blue. Calyx with deep teeth, not open when in fruit."

M. *cóllina* is, in these parts, in flower a few weeks before M. *versícolor*. It is of smaller size, and all the flowers are blue. Both are distinguished from *arvénsis* and its varieties, if *sylvática* and *intermédia* be not genuine species, by the shortness of the flower stalk; also, by their smaller size and earlier flowering.

E'CHIUM.—Corolla wide, irregular.

E. *vúlgare.*—Stem strong, upright, hisped and tuberculated. Leaves hispid, lanceolate. Flowers uni-lateral, large and showy, deep blue colour, sometimes purple.

Eighty species of this genus are known and described.

ANCHU'SA *sempervirens* grows about Reigate. See Lin. Argt.

Order XLII.—SOLANA'CEÆ.—(SOLANEÆ).

Corolla five-lobed. Lobes regular, and folded on each other before opening. Ovary of two cells, or of more than two, with many ovules. Fruit capsular or baccate (a berry). Seeds covered with a wrinkled episperm (seed coat).

SOLA'NUM.—Corolla rotate, five-cleft, spreading. Anthers approaching. Fruit a two-celled, many-seeded berry.

S. *dulcamára.*—Stem woody, climbing. Lower leaves cordate; upper hastate.

S. *nígrum.*—Stem herbaceous. Leaves oval, toothed.

Sprengel describes about three hundred species of this genus.

ATROPA.—Fruit a two-celled berry. Corolla campanulate. Calyx persisting.

A. *belladóna.*—Plant large, upright, bushy. Leaves oval, acuminate, quite entire.

Near the Craigs, Kent; and in Brocket Hall Woods, Welwyn, Herts, 1835—Mr. William Pamplin. Rockingham Forest, near Wandsworth, Northamptonshire. Not many years ago near Boxmoor, on the left of the Tring road.

Under the hill at Merstham, near Reigate, about a mile east of Warwick wood—Peter Martin, Esq., Reigate.

Foot of an old chalk pit on Betchworth hill—Luxford's Reigate Flora, a most excellent guide to the plants of this locality.

HYOSCY'AMUS.—Ovary globular, operculate. Corolla funnel-shaped.

H. *niger.*—Calyx leafy, persisting. Leaves amplexicaule, sinuated. Flowers sessile. Corolla yellowish tawny, striated. Whole plant hairy, viscid, fetid.

Gumshal, Surrey; Bromley, Kent. Fields near Kimbolton, Hunts, as common as the thistle. Bushey Heath, near Stanmore—T. Ralph, Esq.

DATU'RA.—Corolla funnel-shaped, plaited. Capsule four-valved, usually prickly.

D. *stramónium.*—Stem glabrous, dichotomous, spreading. Flowers axillary, large, white.

On rubbish. Not considered indigenous. A weed in many gardens. Waste ground, Chelsea, &c.

Order XLIII.—GENTIANA'CEÆ.

Corolla regular. Ovary one-celled. Ovules many, attached to two sutural parietal trophosperms. Fruit a two-valved, many-seeded capsule.

MENYA'NTHES.—Calyx five-parted. Corolla five-cleft, with a spreading limb, hairy inside. Stamens five. Style single, capitate.

M. *trifoliata.*—Stem repent. Leaves trifoliate.

Great Bog, Hampstead Heath; Hackbridge, Carshalton, Albury, and Shere.

VILLA'RSIA.—Differs chiefly from *Menyánthes* in its rotate corolla, the limb of which is usually fringed.

V. *nymphaeoídes.*—Leaves cordate, swimming. Corolla rotate, with ciliated segments. Flowers axillary, bright yellow.

Thames, about Hampton, Pond on Wandsworth Common; Rhoding; Woodford Bridge, Essex.

CHLO'RA.—Calyx eight-parted, linear, subulate. Corolla eight-parted, with elliptic segments, bearing the eight stamens. Ovary bluntly four-angled. Stigma four-lobed.

C. *perfoliáta.*—Leaves perfoliate. Plant dichotomous, glaucous. Flowers yellow, handsome.

Chalk Pits, Albury, Shere, &c., not rare.

ERYTHRAE'A.—Tube of corolla cylindric, longer than the calyx. Anthers twisting on the ripening of the pollen.

E. *centauréa.*—Stem erect, leafy, six to twelve inches. Radical leaves ob-oval. Stem leaves elliptic, lanceolate. Flowers a clear pink colour.

Var. with white flowers.

GENTIA'NA.—Calyx four and five-cleft. Corolla, sub-campanulate, funnel or salver shaped.

G. *pneumonánthe.*—Leaves linear. Flowers scarcely pedicelled, five-cleft, ten-toothed, large, campanulate, handsome.

Waterdown Forest, Tunbridge Wells—Mr. William Pamplin.

G. *amarélla.*—Stem branchy, two and four inches or more. Leaves lanceolate. Calyx five-cleft. Corolla five-cleft, persistent, covering the long cylindric ovary. Occasionally with a four-cleft flower.

The number of Gentians is one hundred and ten.

Order XLIV.—APOCYNA'CEÆ.

Ovaries two, free or united, containing many ovules. Fruit a follicle.

VI'NCA.—Calyx five-cleft. Corolla five-lobed. Lobes plain, spreading. Tube long, angled, with a prominent throat.

V. *májor.*—Stem upright. Leaves opposite, oval. Peduncle longish. Sepals long and narrow. Stigma very curious and beautiful.

V. *mínor.*—Stem procumbent, spreading. Leaves narrow and pointed.

Var. with variegated leaves.

Var. with variegated flowers, white and pink.

Order XLV.—PRIMULA'CEÆ.

Corolla tubular, limb five-cleft or parted. Ovary one-celled. Ovules numerous, attached to a central placenta. Fruit either a pyx or a three to five valved capsule.

PRI'MULA.—Throat of corolla open. Stigma globose. Fruit capsular. Capsule ten-toothed.

P. *vulgáris*.—Scape one-flowered. Limb of corolla flat.

P. *véris*.—Scape bearing a many-flowered umbel. Limb of corolla concave.

P. *elátior*.—*Umbel more upright. Flowers larger, and less cupped, i. e.* limb of corolla more spreading than P. *véris*.

Not common; Weston Wood, Albury.—Miss Lloyd.

LYSIMA'CHIA.—Calyx five-parted. Corolla rotate. Capsule ten-valved.

L. *nummulária*.—Stem creeping. Leaves roundish. Peduncles one-flowered.

Meadows and wet ground. Not rare.

L. *némorum*.—Stem procumbent. Leaves oval, acute. Peduncles one-flowered.

In shady woods. Not rare.

L. *vulgáris*.—Stem virgate, two or three feet high. Florescence a spicate raceme. Peduncles many-flowered. Flowers large, handsome.

In bogs, Mottingham, near Eltham, Kent. Bogs, Albury. Byfleet, Weybridge, &c.

HOTTO'NIA.—Corolla cup-shaped. Stamens growing out of the throat.

H. *palústris*.—Leaves radical, finely pectinated. Stem erect. Florescence verticilled.

Tooting Common. Lane leading from Harp to Kingsbury, Middlesex. Battersea Fields—T. Ralph, Esq.

ANAGA'LLIS.—Corolla rotate. Capsule lidded (a pyx).

A. *arvénsis*.—Stem procumbent. Leaves oval, punctate below.

A. *cærúlea*.—Stem procumbent. Leaves cordate at base, lanceolate, acuminate, punctate as in *arvénsis*. Sepals pointed.

In a field, near Chipstead, where *arvénsis* is rare, and *cærúlea*, very abundant.

A. *tenélla*.—Stems creeping. Leaves roundish. Stamens densely hairy.

In a bog between Beddington Park and Hackbridge, with *Triglóchin, Alisma ranunculoides, Eupatórum cannab: Iris pseud:* &c. Bogs about Albury and Shere.

SA'MOLUS.—Ovary inferior. Corolla cup-shaped, five-cleft. Capsule opening at the top by five-teeth or semi-valves.

S. *valerándi*.—Stem erect, simple. Leaves ob-oval, almost sessile. Florescence panicled or racemous. Flowers small, white.

Southorp bog, Northamptonshire. Near Oxford abundantly, and Folkstone—Mr. William Pamplin.

Order XLVI.—AQUIFOLIA'CEÆ.

Calyx and corolla of four or six sepals and petals, or monosepalous and monopetalous of as many divisions. Fruit fleshy, having two or six one-seeded nucules.

I'LEX.—Calyx four or five toothed. Corolla rotate, four or five cleft. Stigmas four. Nuts four.

I. *aquifòlia.*—Leaves oval, acute. Lower spiny; upper without spines.

Order XLVII.—CONVO'LVULA'CEÆ.

Corolla plaited, five-lobed. Ovary two and four celled. Ovules few. Sutures of the capsules corresponding with their partition.

CONVO'LVULUS.—Calyx bracteate. Corolla widely bell-shaped, five-plaited. Ovary two-celled, with two seeds in each.

C. *sèpium.*—Stem climbing. Leaves sagittate, with truncate lobes. Bracts large, close to the flower.

C. *arvènsis.*—Leaves as *sèpium,* with sharp lobes. Bracts small, remote. Flowers pink and smaller than those of *sèpium,* which are pure white.

C. *soldanèlla.*—Leaves thick, uniform. Flowers pink, large, handsome.

Beach, Mersea Island.

Of *Convòlvulus,* and the kindred genus *Calystegia,* there are three hundred and thirty-five species.

CU'SCUTA.—Calyx four and five-cleft. Corolla campanulate. Capsule two-celled.

A genus of succulent, climbing, parasitical, leafless, plants.

C. *epìthymum.*—Flowers sessile, in little trusses of four and five. Stems filiform, red.

A parasite. On Heaths. Usually on *Callùna vulgàris,* or *Erìca cinerea.* Not rare, on Hayes' Common. Leith Hill, &c. Bromley Common. On furze, Walton Common. Albury Warren.

C. *europæ'a.*—Corolla four and five cleft, without a scale at the base of the stamens.

On *Lùcern* (*Medicago sativa*) abundantly, near Maidenhead and Chertsey—Mr. William Pamplin.

Order L.—ERICA'CEÆ.

Corolla regular, four or five-lobed, or parted. Stamens usually twice the number of the divisions or lobes. Ovary two or five or eight-celled. Each cell containing many ovules.

ERI'CA.—Calyx four-parted. Limb of corolla four-cleft. Stamens eight. Capsule four-celled, four-valved.

E. *cinèrea.*—Style exceeding the corolla. Leaves in threes.

E. *tètralix.*—Style included. Leaves in fours.

This genus comprises more than five hundred species. The greater part of them are found about the Cape of Good Hope.

CALLU'NA.—Calyx double. Inner coloured.

C. *vulgáris.*—Corolla shorter than the calyx. Leaves opposite, imbricated in four rows.

Var. β.—Leaves rough.

Order LI.—PYROLA'CEÆ.—(WINTER-GREEN.)

Calyx five sepals (or monosepalous by coherence.) Corolla monopetalous, four or five-toothed or cleft (monopetalous in Pyrola, by adhesion of the petals). Stamens eight to ten. Ovary four or five-celled, many-seeded

PY'ROLA.—"Calyx five-cleft. Petals five, often connected at the base. Fruit capsular, five-celled. Seeds invested with a long aril (arillus)."

P. *rotundifólia.*—"Flowers racemous, drooping. Leaves ob-oval, roundish, slightly crenate. Style bent down, curved upwards at the extremity, much longer than the ascending stamens.

Moist woods and bushy places, rare. Bradwell and Middleton, Suffolk; Larlingford, Norfolk—Rev. G. R. Leathes. Kent—Rev. G. E. Smith." Hooker's Flora.

P. *média.*—"Leaves oval, roundish, crenate. Style slightly decurved, longer than the stamens. Stigma with five erect points."

Woods, Woodcot, near Henley-on-Thames, Oxon—Mr. William Pamplin.

Order LII.—MONOPROPA'CEÆ.

Calyx five-sepals. Corolla five petals, or five-parted. Stamens ten. Ovary four or five-celled, many ovules. Fruit capsular, with central placentæ. Seeds indefinite. Stem leafless, covered with fleshy scales. Parasitical plants, with the habit of *Orobanchácea.*

MONO'TROPA.—Sepals gibbous at the base. Style straight. Stigma enlarged, circular.

M. *hypópitys.*—Stem succulent, scaly. Sepals and petals persisting. Florets on short pedicels. Capsule ovate, ribbed. Florescence a spiked raceme.

West corner of Netley Place Wood, Shere. Mickleham—Mr. William Pamplin.

SECTION B.

Ovary inferior.

Order LIII.—VACCINIA'CEÆ.

Ovary four or five-celled. Calyx and corolla as ERICA'CEÆ. Differs chiefly in having its ovary inferior. Fruit a berry.

VACCI'NIUM.—Calyx four-toothed. Corolla four-cleft. Fruit a four-celled many seeded berry.

V. *myrty'llus.*—Peduncles one-flowered. Leaves oval, serrated. Stem angular.

OXYCO'CCUS.—Calyx four-cleft. Corolla four-parted, with revolute linear segments. Filaments conniving. Fruit a many-seeded berry.

O. *palústris.*—Stems filiform, prostrate. Leaves oval, revolute. Segments of the corolla oval.

Gamlingay Bogs, Cambridgeshire. Peat Bog in Woolmer Forest, near Rake, Hants.

Nearly sixty species are known of this genus.

Order LIV.—CAMPANULA'CEÆ.

Corolla regular, bell-shaped or rotate, five-lobed. Fruit capsular, cells two or more, many-seeded, bursting at the sides. Stamens five. Style simple.

CAMPA'NULA.—Stigma three-cleft. Capsule three to five-celled.

C. *rotundifólia.*—Root leaves cordate, roundish, crenated. Stem leaves linear, entire. Flowers panicled, drooping.

C. *pátula.*—Habit similar to C. *rotundifólia.* Leaves elliptic, not so narrow. Florescence spreading. Calyx with long setaceous teeth. Corolla narrow at the base.

On a gravelly bank, not far from Bramshot Church, going towards Henden Heath—Mr. William Pamplin.

C. *latifólia.*—Leaves and stem rough. Segments of the calyx smooth, reflexed or spread, lanceolate. Corolla violet, with lanceolate segments. Leaves mostly oval, lanceolate, toothed, rough; some cordate, all petiolate.

By the stream behind the church, Albury Park, where it is not less than six feet high, with a spike of flowers upwards of two feet long. Roadside, between Ashbourne and Thorpe, Derbyshire. Brighton Road, near Merstham Park.

C. *trachélium.*—Stems upright, two or three feet high, rough and angular. Leaves cordate, lanceolate, crenated and serrated, rough, petioled. Calyx corrugated. Segments rough, lanceolate.

Woods and hedges. Not rare.

C. *glomeráta.*—Stems upright, unbranched. Radical leaves petioled. Upper sessile, all roughish and toothed. Flowers in clusters, usually at the extremity, surrounded by broad concave bracts; sometimes one or two clusters or single flowers near the top. Calyx teeth long, lanceolate. Limb of the corolla spreading.

Chalk Pit, above Halling Park, Croydon. Downs. Not rare.

C. *rapunculus.*—Root fleshy. Stem upright, smooth. Leaves elliptic, sessile, smooth. Sepals linear, lanceolate, spreading. Segments of the corolla patulous.

Near Esher, Surrey, and Bexley, Kent.—Mr. William Pàmplin. Sometimes a weed, in gardens. Guildford Nursery.

C. *hederácea.*—Stems very weak. Leaves cordate, lobed, petiolate. Flowers pedunculate, pale.

A tender, smooth, rare bog plant.

Bog, near High Beech, Epping Forest, or rather near Epping, on the right of the road that leads to Abridge, from the London road, and in the angle formed by their junction. Bog, near Keston Cross, about two miles beyond Bromley, on the Tunbridge road. Bogs, on the moors, about Tunbridge Wells—Mr. William Pamplin.

The author believes that he gathered C. *rapunculoídes*, or some species or variety of *Campánula*, not described above, by a field between the gardens of the Marquis of Exeter and Caistor, Northamptonshire.

C. *hy'brida.*—Stems angular, upright. Leaves sessile, waved, dentate oblong. Ovary prismatic, long. Sepals pointed, longer than the rotate plicate corolla.

This is the type of a newly formed genus, called *Prismatocárpus.*
Potato-field, Shere. Fields on the chalky downs.
More than two-hundred species belong to the genus *Campánula.*

JASI'ONE.—Corolla rotate, with linear segments. Stigma club-shaped, cleft. Capsule two-celled, opening at the top.

J. *montána.*—Florescence terminal, erect hemispherical heads. A five-leaved involucre underneath.

Blackheath. Mitcham Common, Albury and Shere Heaths, &c.

PHYTEU'MA.—Corolla slit. Anthers shorter than the style. Style long and callous. Florets capitate, spreading.

P. *orbiculáre.*—Root-leaves slightly cordate, lanceolate, crenated or serrated. Stem-leaves setaceous. Corolla deep blue, with a curved tube.

Sanderstead and Purley Downs, Croydon. Downs and woods, near Albury, Shere, and Guildford. Dorking Lane, by Denbies, very common.

Order XXXIV.—PLUMBAGINA'CEÆ.

Calyx tubular, plaited, persisting. Corolla monopetalous, or penta-petalous. Ovary one-celled, with one ovule, which is suspended from the top of a trophosperm, which rises from the base of the ovary. Fruit an indehiscent utricle with an inverted seed. Leaves undivided, slightly sheathing. Florescence panicled or capitate.

ARME'RIA.—(*See page* 126.)

Order LVI.—COMPOSI'TÆ.

Florescence many florets, attached to a convex or flattish receptacle, surrounded by a common (usually) many-leaved, or scaly involucre. Stamens united by their anthers. Style simple, with two stigmas. Calyx very minute, adhering to the top of the ovary. Often without a calyx. Fruit an achenium.

Florets erect, tubular, equal in height. Their tops forming a uniform surface, as, Tansy, &c.

EUPATO'RIUM.—Involucre imbricated, oblong. Receptacle naked.

E. *cannabínum.*—Leaves opposite, three or five parted, serrated.

Hackbridge and Beddington; Elmer's End, &c. Marshes about Albury and Shere.

This genus contains about one hundred and fifty known species.

BI'DENS.—Involucre broadly hemispheric, of many leaves, with leafy bracts. Receptacle chaffy.

B. *cérnua.*—Bracts longer than the involucre. Leaves lanceolate, serrated, entire.

Var. B. *mínima.*—Stem simple, three or four inches. Earlier in flower than *cernúa.*

B. *tripartíta.*—Leaves three-parted or cleft.

Ponds. Not rare.

TANA'CETUM.—Involucre hemispheric, imbricated. Receptacle naked. "Fruit crowned with a membranous margin."

T. *vulgáre.*—Leaves pinnatifid, cut in and serrated.

Near the Highgate Archway. Banks of the Wey.

ARTEMI'SIA.—Involucre ovate, imbricated. "Florets of the ray awl-shaped, without pappus."

A. *vulgáris.*—Leaves pinnatifid, with incised segments. Flowers ovate. Receptacle naked.

Borders of fields.

A. *absínthium.*—Flowers very small, pale yellow, drooping. Leaves pinnate or pinnatifid. Segments often ternate. Stem virgate, tall, upright.

Farley Common, Warlingham; Godstone Road, below Croydon.

A. *marítima*—Plant tomentose. Leaves pinnated and pinnatifid. Segments linear. Flowers pendulous.

Var. (A. *gallíca*) with upright flowers. Gravesend.

About one hundred and twenty known species belong to this genus.

ANTENNA'RIA.—Receptacle with little hollow dots (scrobiculate). Involucre imbricated with scarious coloured scales. Differs from *Gnaphálium* more in habit than in essential character.

A. *margaritácea.*—Upright, tall. Leaves alternate, elliptic, lanceolate, downy. Florescence corymbous. Involucres ovate-globular, with pearly white scales. Florets greenish yellow.

In gardens, common. Meadows, near Barking — Botanist's Guide.

A. *dióica.*—Floral stems erect, four or five inches. Barren, spreading. Florescence corymbous. Inner scales of involucre oblong, coloured. Flowers pink, diœcious.

Derbyshire, common on hills.

GNAPHA'LIUM. — Involucre imbricated with membranous scales. Plants covered, more or less, with a cottony or hairy down. Receptacle without scales.

G. *germánicum.*—Stem erect, dichotomous. Flowers in lateral and terminal globular heads.

G. *mínimum.*—Stem erect, variously branched. Flowers in lateral and terminal racemes, exceeding the leaves.

G. *gállicum.*—Stem erect, densely woolly. Leaves very long, linear, woolly, revolute. Florescence clustered, lateral and terminal, on short, densely woolly peduncles. Differs from *mínimum* in the branching habit, and longer, very narrow leaves.

Kingscliffe, Northampton, and fields about Shere.

G. *uliginósum.*—Stem much branched and spreading. Flowers in terminal racemes, shorter than the leaves.

G. *sylváticum.*—Stem recumbent, upright, simple, woolly. Leaves long, linear, lanceolate, narrow at the base, woolly on both sides. Flowers axillary and terminal. Involucre conical. Scales of ditto black, slightly greenish.

Grindleford Bridge, Derbyshire. Woods on Ranmer Common, near Dorking.

G. *réctum.*—Stem erect, panicled. Leaves linear, lanceolate. Larger than *sylváticum.*

Chisselhurst, Kent; a doubtful species.
Sir William J. Hooker describes it as a variety of *sylváticum.*

CONY'ZA.—Involucre imbricated, cylindric. Scales unequal, ciliated at the top. Pappus simple.

C. *squarrósa.*—Stem upright, virgate. Leaves entire, subpetiolate, elliptic, downy as the stem. Florescence subpaniculate, cymose.

Smitham Bottom, &c. Albury and Shere Downs.

Florets tubular. Limb cleft and spreading.

A'RCTIUM.—Involucre globular, with hooked scales. Receptacle chaffy.

A. *láppa.*—Leaves large, cordate, petioled. Involucre glabrous.

A. *bardána.*—Involucre downy.

A variety of the former?

CA'RDUUS.—Involucre (usually) swelling, imbricated with spiny scales. Receptacle hairy. Leaves armed with spines.

C. *acanthoídes.*—Involucre globular, with loose scales. Leaves sinuated.

C. *palústris.*—Involucre ovate, with close scales. Leaves pinnatifid.

Var. with white flowers.

The two foregoing species are distinguishable by the different forms of their involucres. C. *acanthoídes* has a rather woolly head and a deep purple flower. It is not so common as C. *palústris.*

C. *tenuiflórus.*—Involucre cylindric. Scales lanceolate, loose, erect. Leaves hoary or downy beneath.

C. *lanceolátus.*—Involucres large, ovate or globular, downy, with spreading scales. Leaves pinnatifid, with two spreading lobes in each segment. Involucre twice as large as *acanthoídes.*

C. *nútans.*—Scales of involucre flat, thin, lanceolate, mucronate, reflexed and spreading, clothed with spider-web-like down.

C. *arvénsis.*—Leaves sessile, not decurrent as in the above species. Flowers panicled.

Fields, common.

C. *erióphorus.*—Involucre woolly, spider-web-like. Leaves sessile. Segments bifarious (in two ranks), lanceolate, entire, ciliated, terminated by a long spine.

Rockingham Forest and Boroden Heath, Northamptonshire. Between Newbury and Abingdon, not unfrequent — Mr. William Pamplin.

C. *praténsis.*—Leaves simple, lanceolate, ciliated, woolly underneath. Stem nearly leafless, one-flowered. Involucre hairy.

Wandsworth Common, rare. Fens, Hunts, common.

C. *forstéri.*—"Leaves slightly decurrent, pinnatifid, spinous, downy beneath. Stem panicled, hollow. Involucre ovate, rather cottony. Outer scales spinous."

"Foot of St. George's Hill, Weybridge—J. S. Mill, Esq.

"Boggy woods near Frant, Sussex, two miles from Tunbridge Wells"—Mr. J. F. Forster.

The author believes he met with a decayed plant in this locality, viz., in a boggy plantation of the Marquis of Abergavenny, about half way between Frant and the Wells, in the beginning of September, 1837. The stem was hollow, two to three feet high, with downy leaves, and a much larger flower (involucre) than C. *praténsis.* The only difference I perceive between C. *praténsis*, and the Tunbridge plant above-mentioned, consists in the rather leafy stem, and perhaps in the larger flower; but as it is unsafe to judge from a single plant, I do not venture to affirm that th[illegible] are different or the same. Luxuriant specimens of C. *pr*[illegible]*nsis* are more than one-flowered.

C. *acáulis.*—Leaves like C. *arvénsis*, spreading. Involucre ovate with a long neck. Scales close without spines. Stem none, or very short. Flowers appear as if sitting on the turf.

C. *mariánus.*—Leaves smooth, shining, with milky veins. Scales of the involucre with strong spreading spines.

Nearly 200 species belong to the genus *Cárduus* with *Cnícus.*

CARLI'NA.—"Outer scales of involucre spiny; inner, scarious coloured, spreading. Receptacle chaffy. Pappus feathery."

C. *vulgáris.*—Inner scales white; outer pinnatifid. Flowers purplish, few, usually terminal. Stem upright, a few inches high.

Downs, every where.

ONOPO'RDUM.—Receptacle honey-comb-like. Somewhat chaffy. Involucre as in *Cárduus.*

O. *acánthium.*—Leaves oval, oblong, woolly on both sides.

SERRA'TULA.—Involucre semi-cylindric, imbricated, with unarmed scales.

S. *tinctória.*—Root-leaves toothed and pinnatifid. Upper entire and smooth.

Woods, Hampstead, &c.

A white-flowered variety, not uncommon.

CENTAURE'A.—Receptacle hairy or bristly. Outer florets large, funnel-shaped, irregular. Involucre scaly.

C. *jacéa.*—Scales of the involucre entire, with three or four small spreading spines from the apex, paler than in C. *nígra.* Leaves linear, elliptic, lanceolate, toothed, mucronate. Stem slenderer, and more branching than *nígra,* from which it greatly differs in size and habit.

C. *nígra.*—Scales oval, ciliated, bristly. Root leaves lyrate, upper oval. Involucre rounded, black.

C. *nígra var.*—Scales lanceolate, ciliated. Ciliæ horizontal; in C. *nígra,* partly vertical. Peduncle thickening upwards. Leaves oblong, two-toothed at the base. Plant more bushy than C. *nígra.*

Linkfield, Sussex, road between the village and the green, five miles from East Grinstead, towards Godstone.

C. *scabiósa.*—Leaves pinnatifid. Segments lanceolate, serrated. Scales of the involucre pubescent.

β A variety with white flowers.

C. *cyánus.*—Leaves linear, entire; lower toothed. Scales of the involucre serrated. Flowers blue.

C. *solstitiális.*—Scales of the involucre entire, armed with erectish spines, the terminal spines very long. Flowers solitary. Leaves decurrent. Stem winged, leafy, densely tomentose, wings prickly.

Near Dover—Mr. Wm. Pamplin.

A cultivated specimen of this plant sent me by Mr. Pamplin, has compound, more divergent, and shorter terminal spines. The scales are broader, and the heads of florets larger. The plant is smaller, not so robust, and is without the dense, hoary pubescence.

C. *calcítrapa.*—Scales of the involucre armed with very divergent spines. Heads sessile, lateral. Stem branchy, branches spreading.

Several places about Barnes, Surrey. Northfleet, Kent; abundant—Mr. Wm. Pamplin. Newmarket.

Upwards of 180 species of this genus are described by Sprengel.

Florets tubular at the base. Limb linear, spreading, notch at the tip.

TRAGOPO'GON.—Involucre simple, (not imbricated,) man leaved.

T. *praténse.*—Leaves of the involucre equal in length to the floret

PI'CRIS.—Involucre double; outer a little distant from th inner.

P. *echioídes.*—Leaflets of the outer involucre four or five, ova large; inner, with a pinnated awn.

This is the type of the new genus *Helmínthia.*

P. *hieracioídes.*—Leaflets of the outer involucre several, small linear; the inner compact, upright, equal.

The pappus in P. *echioides,* (*Helminthia echioídes*) is said to be stipitate, (stalked), and in P. *hieracioídes* sessile.

The former grows in most parts where the soil is a stiff clay, abou road sides, fields, and wastes. The latter is found more commonly on or near the chalk, as at Mitcham, Sutton, &c., Surrey.

SO'NCHUS.—Involucre imbricated, swelling at the base.

S. *oleráceous.*—Involucre smooth. Leaves runcinate, smooth.

Var. β. Undivided leaved variety, with prickly margins.

Var. γ. Leaves with milky veins, like *Cárduus mariánus.*

S. *arvénsis.*—Leaves runcinate, cordate at the base, more uniform than *oleráceus.* Peduncles and involucres hispid; latter blackish Flowers larger, later in flowering.

S. *palústris.*—Leaves sagittate at the base.

Twice the size of *arvénsis.*

About the Medway, not very rare. Halling, Kent.

LACTU'CA.—Involucre imbricated, cylindric. Down (pappus) stipitate.

L. *virósa.*—Root-leaves entire, oboval. Stem leaves amplexicaule, lobed.

Not rare about London.

L. *scariola.*—Leaves lanceolate, sagittate, not so spreading as in L. *virósa.*

Mr. Pamplin used to find it on the bank of the Wandsworth and Croydon railway, between Mitcham Common and Croydon.

L. *saligna.*—"Root leaves lanceolate, with few teeth. Cauline leaves linear, lanceolate, entire, sagittate. Flowers lateral, with small floral leaves."

Has been gathered in salt marshes about Erith.

PRENA'NTHES.—Scales or leaflets of the involucre lax. Pappus sitting.

P. *murális.*—Involucre smooth, purplish, five-flowered. Leaves lyrate, toothed, angled, smooth.

Woods and walls.

LEO'NTODON.—Involucre imbricated with loose scales. Pappus stipitate.

L. *taráxacum.*—Outer scales reflexed. Scape tubular, smooth, one-flowered.

L. *palústre.*—Scarcely different from *taráxacum*, except in size, which is much less. The scape is almost solid, the scales of the involucre not so reflex.

Shere heath; not rare.

APA'RGIA.—Involucre ovate, imbricated, beset with scales. Receptacle dotted. Pappus feathery, sessile.

A. *híspida.*—Scape rough and tapering, one-flowered.

A. *hírta.*—Outer florets destitute of pappus, scaly. Involucre swelled at the base, nearly smooth. Scales lax. Root præmorse, (as if bitten across.)

This plant is the type of the genus *Thríncia,* which differs in the ray florets having a scaly pappus, and in the nearly simple involucre.

A. *autumnális.*—Scape branching, with scaly pedicels.

HYPOCHÆ'RIS.—Receptacle chaffy. Involucre scarcely imbricated. Pappus feathery.

H. *radicáta.*—Leaves runcinate, obtuse, rough. Stems leafless, smooth, branching. Peduncles scaly.

H. *glábra.*—Radical leaves spatulate. Stem glabrous, with one or two oval sessile leaves under the branches. Rather more branchy than *radicáta*, and of various magnitudes.

A proliferous variety, in a sandy field between the railway and Weybridge.

CRE'PIS.—Involucre beset with lax scaly leaflets. Pappus stipitate, simple.

C. *tectórum.*—Cauline (stem) leaves amplexicaule. Upper ditto, sagittate. Florescence, a broad panicle. Stem glabrous.

C. *biénnis.*—Inner scales of involucre blackish. Florets large, Sonchus-like. Pedicel hollow. Stem hispid, with amplexicaule, nearly entire leaves. Root-leaves runcinate, pinnatifid.

C. *fœ'tida.*—"Leaves scabrous, sessile, runcinate, pinnatifid; upper lanceolate, cut at the base. Stem hairy, involucre downy."

"Dry chalky ground." Not common.

This plant is the type of the genus *Borkhaúsia;* it differs from *Crépis* in its ovate involucre, and its stipitate pappus.

HIERA'CIUM.—Involucre imbricated, ovate. Pappus simple, sessile.

H. *pilosélla.*—Leaves entire, downy, or hairy on the under side. Scape one-flowered. Root with creeping leafy shoots.

H. *murórum.*—Only one cauline leaf, which is cordate at the base, petioled, with large antrorse teeth, acuminate. Stem about eighteen inches, slender, hairy, branching at the top, and bearing about six flowers. Peduncles and involucres furnished with black glandular hairs.

In woods and sandy lanes about Shere. Leith hill, &c.

H. *sylváticum.*—Stem leafy. Leaves oval, lanceolate, with erect teeth. Flowers on long erect alternate branches, two or three on each. Peduncles hairy and downy. Involucre blackish. Stem nearly two feet high, green, striated, hairy.

Var. Stem erect, unbranched, tapering, hairy, leafy. Leaves elliptic, lanceolate, sessile, toothed; lower about two or three inches long; upper smaller, and smooth above, rigid. Peduncles somewhat woolly. Receptacles glandular. Florets with five teeth.

Leith Hill.

H. *subaúdum*.—Stem leafy, round, hairy, reddish brown. Leaves sessile or semi-amplexicaule, with small teeth. Flowers corymbous.

H. *umbellátum*.—Stem leafy. Leaves linear, lanceolate, slightly toothed. Whole plant smooth.

LAPSA'NA.—Involucre cylindric, scaly. Seed destitute of pappus.

L. *commúnis*.—Involucre angular. Stem panicled, branchy.

L. *pusílla*.—"Scape branchy, with enlarged fistulose extremities. Leaves oboval, oblong, toothed."

Gravelly and sandy fields about Hampton.—E. Bot.; Botanist's Guide, &c.

CICHO'RIUM.—"Involucre double, outer scales lax. Pappus scaly, shorter than the seed (achenium). Receptacle somewhat chaffy."

C. *íntybus*.—Flowers large, blue, handsome, sessile. Twin leaves runcinate. Stem strong, upright, viscid.

Croydon, Carshalton, Guildford, Albury, Shere, &c. Chiefly on a chalky soil; sometimes on sand and gravel.

* * * * Florets of the ray or circumference, as in * * *; of the disk or centre, as in Section *.

TUSSILA'GO.—Involucre many-leaved, simple. Leaflets equal.

T. *fárfara*.—Scape one-flowered, scaly. Leaves cordate, angular. Springing up some time after the disappearance of the flowers.

T. *petasítes*.—Florescence spicate, close. Leaves like the preceding, but very large.

On river banks, &c.

T. *petasites* is the type of the genus *Petasites*, which is characterised by its two-rowed involucre, its flowers being destitute of ray florets, and by its many-flowered scape. The flowers are mostly dioecious.—Hooker in Br. Flora.

SENE'CIO.—Involucre imbricate, cylindric. Leaflets equal, scaly.

S. *vulgáris*.—Florets of the ray deficient.

One of our most common weeds; flowers during the whole year.

S. *viscósus*.—Ray florets revolute. Leaves pinnatifid, viscid. Stem branchy and spreading. Plant hairy, viscous, and fetid.

Rare. Copenhagen Fields, near the Caledonian Hospital.

S. *sylváticus.*—Florets of ray revolute. Plant hoary. Leaves pinnatifid, slightly viscid. Smell strong.
Woods, &c.

S. *lívidus.*—Hairier. Outer scales of involucre not adpressed, somewhat fringed, pale green.
A doubtful species. In recently cultivated places.

S. *squálidus.*—"Ray florets large, spreading. Florescence loosely corymbous. Leaves pinnatifid, with linear, lanceolate, dentate, distant segments. Plant branchy, smoothish."
Walls, Oxford—Mr. Wm. Pamplin.

S. *jacobæ'us.*—Leaves lyrate, doubly pinnatifid, smooth. Flowers corymbous, or in broad flat panicles.

S. *laciniátus*, (Gray.)—Near *jacobæ'us* in specific character. Differs from it in downy leaves more regularly pinnatifid.
About the palace, Croydon, and on the old wall, near St. Mary's, Colchester.

S. *aquáticus.*—Root leaves entire. Stem leaves pinnatifid. Florets of the ray broader, and not so numerous as in *jacobæ'us.*

S. *tenuifólius.*—Leaves pinnatifid, with linear, revolute segments, white below. Stem cottony. Florets of the ray linear, minutely toothed.
Common about Norwood, on the clay. Highgate archway. Chalky places, common.

CINERA'RIA.—Involucre cylindric, simple, composed of many linear, lanceolate bracts. Receptacle naked. Pappus simple.

C. *integrifólia.*—Radical leaves oblong, elliptic. Stem simple, upright, with one or two leaflets. Florescence umbellate, bracteate. Florets not numerous.
Streatly, near Reading—Mr. Wm. Pamplin.

SOLIDA'GO.—Involucre imbricated, with close scales. Florets of the ray very few.

S. *vírga-aúrea.*—Lower leaves elliptic. Stem-leaves narrow, lanceolate. Flowers in panicled racemes.
Hampstead; also about Addington Hills, Croome Hurst Wood; Albury, &c.

A'STER.—Involucre cylindric, imbricated. Outer scales (bracts) spreading. Receptacle naked. Pappus simple. Florets of the ray more numerous than in *Solidágo.*

A. *tripólium.*—Leaves fleshy, spatulate. Florets of the ray purple; of the disk yellowish. Scales of involucre unequal.
Common in the marshes about Erith, North Fleet, &c.

PULICA'RIA.—Involucre imbricated, roundish, with linear, acuminate scales.

P. *dysentérica.*—Leaves amplexicaule, cordate, oblong, downy below. Stem hairy. Flowers large, panicled.

P. *vulgáris.*—Leaves lanceolate, oblong, hairy. Flowers small. Ray florets very short. Barely one-third the size of *dysentérica.*
Wet places. Golder's Green, Hampstead. Chalk-pit in Combe

Lane, Croydon; Walton on the Thames, &c.; Chingford, Epping Forest; Near Ealing—Mr. Wm. Pamplin. Not a very common plant.

BE'LLIS.—Receptacle conical. Involucre hemispheric. Scales membranous.

B. *perénnis.*—Scape one-flowered.

CHRYSA'NTHEMUM.—Receptacle convex. Involucre hemispheric. Scales membranous.

C. *leucánthemum.*—Flowers white. Leaves amplexicaule, obtuse, pinnatifid at the base. Root-leaves obоval, petioled.

C. *ségetum.*—Flowers yellow. Leaves amplexicaule, toothed at the base, smooth and glabrous above.

Sandy fields about Albury; not very common.

PYRE'THRUM.—Pappus membranous or scaly. Scales of the involucre acute.

P. *parthénium.*—Leaves petioled, compound, with flat segments. Leaflets oval, cleft.

P. *inodórum.*—Leaves pinnated, or bipinnated, with filiform segments. Flowers larger than in *parthénium.*

DORO'NICUM.—Bracts (scales) of the involucre double, equal. Receptacle naked. Pappus simple.

D. *pardaliánches.*—"Leaves cordate, toothed, the lowermost on long petioles; the intermediate with the petioles dilated into two broad semi-amplexicaule ears at the base. The uppermost sessile and amplexicaule."

D. *plantagíneum,* (Linn. ?)—"Leaves toothed, radical, on naked stalks, oval or rough, cordate, produced at the base. Cauline leaves sessile, except the lowest, which has a winged stalk, with amplexicaule auricles. Intermediate leaves cordate, oblong; upper oval, acuminate."

Roadside, Salinghall, Essex—T. Walford, Esq. Widdington, Essex—G. Forster, Esq.

The author gathered one or other of these two about a field near the Jolly Sailor, Norwood, and planted it in the garden of Mr. Francillon, where it very probably remains. He does not venture to affirm that it is indigenous.

MATRICA'RIA.—Receptacle conical, naked, without pappus.

M. *chamomílla.*—Leaves pinnated, glabrous. Leaflets linear.

A'NTHEMIS.—Receptacle chaffy. Pappus scaly. Involucre hemispheric.

A. *nóbilis.*—Leaves much divided, segments linear and pointed, somewhat hairy. Easily known by its strong smell.

Hampstead Heath; Millhill; Toteridge; Bergholt Heath, Essex, &c.

A. *cótula.*—Erect, much divided, smooth leaves, with subulate segments. Scales of receptacle setaceous.

On rubbish.

A. *arvênsis.*—Paleæ lanceolate. Ray florets large. Stems decumbent. Plant hoary.

Fields about Teddington, Middlesex; Croydon; Shere and Albury, Surrey.

ERI'GERON.—Involucre cylindric, imbricated with unequal scales, close, conniving. Florets numerous.

E. *canadénse.*—Stem rough, upright, very leafy. Leaves linear, lanceolate. Flowers yellowish, very numerous.

About Brixton, on waste ground near the church.

E. *ácre.*—Stems upright, leafy, hairy. Leaves ob-lanceolate, sessile. Florets of the ray numerous, purplish.

On chalky downs, common.

ACHILLE'A.—Receptacle chaffy. Involucre ovate, imbricated, with unequal scales.

A. *ptármica.*—Leaves lanceolate, acuminate, sharply serrated.

A. *millefólium.*—Leaves bipinnatifid, hairy. Stem furrowed.

XA'NTHIUM.—Monœcious. (Barren flowers.) Involucre of few scales. Corolla obovate. Fertile flowers, with a simple prickly involucre enclosing two florets. Calyx and corolla deficient. The one-seeded fruit enclosed by the indurated involucre.

X. *strumárium.*—Leaves cordate. Fruit with a straight beak.

South of England; rare. It was found a few years ago on rubbish, near Dulwich, Surrey.

Order LVII.—DIPSA'CEÆ.

Florescence hemispheric or globular. Surrounded by a many-leaved involucre. Calyx double. Inner adhering to the one-celled, one-seeded ovary. Corolla tubular, with four or five unequal divisions.

DI'PSACUS.—Receptacle furnished with chaffy, spiny, hollow scales. Involucre leafy.

D. *sylvéstris.*—Leaves opposite, sessile. Scales of the receptacle straight.

D. *fullónum.*—A stronger plant. Leaves connate. Scales of receptacle hooked.

Supposed a variety of *sylvéstris.*

D. *pilósus.*—Leaves petioled, with a small leaflet on each side of the base. Heads smaller than in *sylvéstris,* hairier, and not so rigid.

In a dark narrow lane near to the Brent, which is part of the way from Child's Hill to Hendon, across the fields; near Beggar's Bush, Croydon; about Ongar, Essex, &c.; Guildford—J.S. Mills, Esq.—Hooker's Flora. Selborne, plenty.

Hanging Wood, Albury, near the Paper Mills.

SCABIO'SA.—Receptacle chaffy or naked. Calyx double. Involucre many-leaved.

S. *succísa.*—Florets in globular heads. Root-leaves oval. Stem-leaves somewhat toothed. Stem simple.

Pastures.

S. *arvénsis*.—Stem leaves pinnatifid. Stem branched. Distinguished from S. *succísa* by its large size and divided leaves.

Cornfields.

S. *columbária*—Corolla five-cleft. S. *incísa* and S. *arvénsis* have a four-cleft corolla. Leaves pinnatifid, with linear segments.

Chalky pastures; common.

Order LVIII.—VALERIANA'CEÆ.—(VALERIANEÆ.)

Calyx very minute, toothed. Corolla five-lobed, irregular. Ovary one to three celled. Stamens one to three. Fruit, an achenium, crowned by the teeth of the calyx, or by a feathery pappus.

VALERIA'NA.—Corolla gibbous or spurred. Achenium crowned with pappus.

V. *officinális*.—Leaves pinnate. Leaflets lanceolate, serrated, or toothed. Flowers white, cylindric, with five-cleft limb.

About Merton Abbey, &c.

V. *dioíca*.—Root leaves oval, on long petioles. Stem-leaves pinnate or pinnatifid. Smaller than *officinális*.

V. *pyrénaica*.—See Lin. Argt.

V. *rúbra*.—Corolla tubular, linear, with a five-cleft irregular spreading limb, spurred. Monandrous. Leaves entire, sessile, oval, lanceolate.

Old walls, Colchester, common; Albury Park garden wall, by the terrace; Arundel Church, &c.

This species is the type of the genus *Centránthus* of some authors. It differs from the other two species in its spurred monandrous florets, and entire leaves.

FE'DIA.—Corolla gibbous. Calyx toothed, crowning the seed.

F. *olitória*.—Stem dichotomous. Capsule subglobose, inflated, glabrous, crowned with three obscure inflexed teeth of the calyx. Of some reputation as a salad.

F. *dentáta*.—Leaves long and narrow, with two long teeth, one on each side of the base.

A variety of this species is remarkable for a development of the pear-shaped calyx, the limb of which is distended into fleshy broad lobes.

The distinction between these two species appears, from Sir William J. Hooker's description, to be, that this species has an ovate, ribbed, acuminate capsule, crowned with the prominent cup-shaped, oblique, unequally four-toothed calyx.

Order LIX.—RUBIA'CEÆ.

Sub-Order.—STELLA'TÆ.

Corolla regular, four-lobed. Stamens alternate, equal in number to the lobes of the corolla. Ovary two-celled, one ovule in each. Fruit two one-seeded nuts, usually crowned by the calyx. Leaves whorled.

GA'LIUM.—Nuts two, globular, crowned with the calycine segments. Corolla rotate.

G. *cruciátum.*—Leaves in fours, elliptic, oval. Flowers axillary, yellow. Stem upright. Whole plant hairy.

G. *vérum.*—Leaves in eights, linear, furrowed. Flowers yellow, in dense panicles.

Pastures, banks, &c.

G. *uliginósum.*—Leaves in sixes, lanceolate, mucronate. Margins rough, with reflexed prickles. Flowers white, on terminal peduncles.

Watery places.

A variety of *uliginósum*, or (*witheringii?*) Differs chiefly in locality, viz., heaths and dry places. Leaves slightly reflex.

G. *saxátile.*—Stalk much branched, prostrate, smooth. Leaves in sixes, oboval, obtuse, mucronate. Flowers whitish, in terminal trichotomous panicles.

Heaths, &c.

G. *mollúgo.*—Leaves in eights, elliptic, obtuse, mucronate. Flowers in a widely spread panicle. Larger than the before-mentioned species.

Hedges.

G. *eréctum.*—Leaves in eights, smooth, shining, with upward prickly serratures, lanceolate. Panicles trichotomous.

Distinguished from *mollúgo* by its more acuminate leaflets, and by its more shining, flaccid stem.

Hedges and pastures; not very common. Combe, Croydon; Dorking, in a field between Betchworth Mill and the town, near the foot-path.

G. *palústre.*—Leaves in fours, unequal, obtuse. Stems smooth.

Ditches, &c.

G. *aparíne.*—Whole plant very rough, with backward pointed bristles. Leaves in eights, lanceolate, keeled. Fruit rough, smooth in the above-described species.

G. *ánglicum.*—"Leaves in sixes. Branches slender, usually trichotomous. Stems slender, rough."

About Cobham, Kent.

G. *tricórne.*—"Leaves in eights, rough. Stem rough, upright. Peduncles axillary, three-flowered. Fruit granulated."

Fields near Chipstead, Surrey.

ASPE'RULA.—Corolla funnel-shaped, four-cleft. Fruit not crowned with the calyx.

A. *odoráta.*—Leaves in eights, lanceolate. Flowers on longish pedicels, panicled.

Woods; not rare. This plant retains its grateful odour for many years.

A. *cynánchica.*—Stem leafy. Leaves ternate or quaternate; upper very unequal, all linear. Tube of corolla long. Limb quadrifid.

Banks and downs about Croydon, Albury, Shere, &c., on the chalky hills.

SHERA'RDIA.—Corolla funnel-shaped. Fruit covered with the calyx.

S. *arvénsis.*—Leaves in sixes. Flowers terminal, umbellate, sessile.

Cornfields.

Order LX.—CAPRIFOLIA'CEÆ.

Corolla five-cleft, or of four or five petals. Stamens usually equal in number to the lobes or to the petals of the corolla, and alternate. Ovary five-celled, with one pendent ovule in each, or several ovules. Fruit a berry, or dry drupe, surrounded by the persistent calyx.

* Corolla irregular.

LONICE'RA.—Corolla tubular or funnel-shaped, five-cleft. Berry one, two, or three celled, many seeds in each.

L. *periclýmenum.*—Florets capitate. Leaves oval, rather hairy.

Var. β. Leaves sinuated, more glaucous, and hairy underneath.

Woods about Highgate.

L. *xylósteum.*—Flowers in pairs. Leaves very pubescent and soft.

Hedges; not common. Haverstock Hill, nearly opposite to the Lower Nursery. Hedge at the Rev. S. Palmer's, Chigwell, Essex.

* Corolla regular.

VIBU'RNUM.—Calyx five-cleft. Corolla five-lobed. Styles three. Berry one-seeded.

V. *lantána.*—Leaves elliptic, cordate, serrated, downy below. Flowers in terminal cymes.

V. *ópulus.*—Leaves three-lobed, glabrous, acuminate, serrated. Flowers in cymes. Outer florets barren.

Var. β. Flore pleno. Guelder-rose or Snow-ball.

In shrubberies.

SAMBU'CUS.—Corolla rotate, five-lobed. Berry one-celled, three-seeded.

S. *nígra.*—Flowers in cymes, with five principal branches. Leaves pinnate. Leaflets oval. Fruit black.

Var. γ. Leaflets incised. Fruit whitish.

Albany Road, Regent's Park.

S. *ébulus.*—Stem herbaceous. Cymes tripartite.

Albury, in a field occupied by Mrs. Wilkinson, rare. Near Wansford, Northamptonshire. Selborne, ruins of the Priory, and at the Alton end of the village. Ewell—Mr. Pamplin.

CO'RNUS.—Calyx four-toothed. Corolla tetrapetalous, (four petals.) Fruit drupaceous, containing a two-celled, two-seeded nut.

C. *sanguínea.*—Leaves broad, oval, strongly nerved. Flowers in cymes. Segments of corolla lanceolate, acute, white.
Hedges; not rare.

Order LXI.—LORANTHA'CEÆ.

Petals three, four, or eight, more or less united at the base. Stamens equal in number to the petals, and opposite. Ovary one-celled, with a single pendulous ovule. Parasitical shrubby plants, with veinless, fleshy, exstipulate leaves.

VI'SCUM, (Diœcious.)—Barren flower, no sepal; petals four; fertile ditto; calyx minute; petals four. Berry one-seeded.

V. *álbum.*—Leaves lanceolate, obtuse. Stem dichotomous. Flowers axillary.

Order LXII.—CUCURBITA'CEÆ.

Monœcious. Corolla five-cleft or parted. Stamens five, united at the base. Fruit baccate.

BRYO'NIA.—Calyx five-toothed. Style trifid. Berry few-seeded.

B. *dioíca.*—Stem climbing. Leaves palmate, rough.

Ord. Primula'ceæ. Gen. *Sámolus.* Ovary inferior, (*see page* 141.)

DIVISION D.

Perianth double. Corolla polypetalous.

Section A.

Ovary superior.

Sub-section 1.—Stamens definite, free.

Order LXIII.—LYTHRA'CEÆ.

Calyx monosepalous, tubular. Corolla four to six petaled, inserted on the top of the calycine tube. Stamens equal in number to the petals, or double their number, rarely indefinite. Ovary of several cells, containing many ovules in each. Fruit capsular, covered by the persistent calyx.

LY'THRUM.—Calyx cylindric, twelve-toothed. Petals six. Stamens twelve, in two rows. Capsule oblong.

L. *salicária.*—Leaves opposite, cordate, lanceolate. Stems tall, erect. Flowers spicate, bracteate, in pairs, opposite.
Various parts of the Wandle. Banks of the Wey, &c.

PE'PLIS.—Calyx bell-shaped. Petals and stamens six.

P. *pórtula.*—Stems prostrate, creeping, leafy, often floating. Leaves petioled, oboval, opposite. Petals very small, often wanting. Capsule globular, two-celled, many-seeded.
Watery places; margins of ponds, common.

Order LXIV.—ILLECEBRA'CEÆ.

Calyx of five more or less deep divisions. Petals (if any) very small, inserted in the calyx. Ovary one-celled, with one ovule, or a few ovules on a basilar podosperm, or on a short trophosperm. Stamens usually five.

SCLERA'NTHUS.—Calyx tubular, contracted at the throat. Petals none. Stamens ten, set on the top of the calycine tube. Capsule one-seeded.

S. *ánnuus.*—Calyx teeth spreading.

S. *pérennis* ?—Calyx closed by the teeth when in fruit. Stem procumbent.

Addington Hills; not common.

HERNIA'RIA.—Calyx five-parted, investing the monospermous, membranous, indehiscent capsule. Stamens ten, five of which are barren.

H. *glábra.*—Stem branchy, prostrate. Florets in axillary clusters. Leaves very small, elliptical.

The hairy variety, H. *hirsúta*, is distinguished by its roughness, fewer-flowered clusters, and its greater rarity.

(Cultivated specimens.)

Order LXV.—TAMARICA'CEÆ.

Calyx four to five parted, persistent with the petals, inserted into its base. Stamens equal, or double the number of petals, hypogynous, (inserted under the ovary). Capsule three-valved, one-celled. Shrubs or herbs with virgate branches. Leaves alternate, minute.

TA'MARIX.—Calyx five-parted. Corolla of five petals. Stamens five or ten. Stigma sessile, feathery. Capsule many-seeded.

T. *gállica.*—Leaves amplexicaule, appressed, acute. Florescence in lateral spikes.

Coast of Kent—Rev. G. E. Smith. Hurst Castle, Hastings.

Order LXVI.—PORTULA'CEÆ.

Calyx of two to five sepals, or five-cleft. Corolla five-petaled, or monopetalous and cleft. Ovary one-celled, with few ovules. Style single. Stigmas small, filiform. Seeds attached to a central placenta.

MO'NTIA.—Calyx of two sepals. Corolla monopetalous by cohesion, irregular. Stamens three. Capsule three-valved, three-seeded.

M. *fontána.*—Leaves opposite, spatulate, entire. Flowers very minute, white.

Only expanded during a bright sun-shine.

Boggy places; not rare.

Order LXVII.—DROSERA'CEÆ.

Sepals and petals five. Stamens of the same number or double. Capsule one-celled, three-valved, many-seeded.

DRO'SERA.—Styles six. Capsule three to five valved.

D. *rotundifólia,* — Leaves radical, roundish. Scape bearing a raceme of white flowers.

Great Bog, Hampstead Heath.

D. *longifólia.* — Scape shorter than *rotundifólia,* more bushy. Leaves elliptic, spatulate, on long stalks.

D. *ánglica.*—Larger than *longifólia.* See Lin. Argt.

The specimen sent me by Mr. Pamplin, gathered by Mr. Dickson on Moors, near Fort-William, bears fewer flowers, though considerably larger, than *longifolia.*

D. *longifólia* and *rotundifólia* are found on Walton Common, near the London and Southampton Railway; also, near a piece of water, about a mile beyond Cobham Church, a little to the left of the Guildford road.

Order LXVIII.—CRUCIFERA'CEÆ (CRUCIFERÆ).

Sepals four. Petals four, arranged crosswise. Stamens six, tetradynamous (four long and two short). Fruit a two-celled pod or pouch.

This order corresponds with class *Tetradynámia,* Linnæus.

* Fruit a pouch.

DRA'BA. — Pouch ovate. Partition parallel to the flattish valves.

D. *vérna.*—Leaves all radical. Flowers on a scape. Petals cleft. Calyx spreading.

On walls, dry banks, and commons.

ALY'SSUM.—Pouch pointed, with the persisting style. Partition parallel to the concave or flat valves, three or four seeds in each cell.

A. *marítimum.*—Leaves lanceolate, acute, entire. Stem branchy and spreading.

Among the refuse of gardens, on Hampstead Heath, not wild. Shrubbery St. Ann's Schools, Brixton Hill.

LEPI'DIUM. — Pouch notched, ovate or sub-cordate; valves keeled. Partition at right angles to them. One seed in each cell.

L. *campéstre.*—Pouch rough. Stem leaves sagittate, toothed.

L. *smíthii.*—Radical leaves entire, elliptic, on very long filiform petioles. Stem-leaves few, dentate. Pouches broadly winged at the tops. Style longish.

May be easily known from any other British *Lepídium* by its root-leaves, shortness of stem, &c.

Portsmouth—W. W. Saunders, Esq., F.L.S.—Sent by Mr. William Pamplin.

L. *ruderále.*—Without petals. Only two stamens. Leaves pinnate or pinnatifid, spreading.

L. *latifólium.*—Leaves oval, lanceolate, entire, and serrated, glaucous. Stem three feet high. Flowers white, small.

Salt marshes and banks, Essex, common.

CAPSE'LLA. — Pouch triangular, cuneate at the base, not winged. Cells many-seeded.

C. *búrsa pastóris.*—Leaves various: some entire, some lobed, some pinnatifid.

HUTCHI'NSIA.—Pouch elliptic. Cells two-seeded.

H. *petræ'a.*—Leaves pinnatifid, with entire segments. Petals shorter than the calyx.

Rare. Eltham church-yard wall.

TEESDA'LIA.—Pouch ob-cordate. Cells two-seeded. Two outer petals larger than the two inner, as in *Ibéris.* Differs from *Ibéris* in its slightly convex and concave silicle.

T. *nudicáulis.*—Leaves (radical) somewhat pinnatifid at the base. Stem without leaves. Florescence like Candytuft.

Albury and Shere Heaths. Epping Forest. Putney Heath.

IBE'RIS.—Pouch globular, with a longish style. Cells two-seeded.

I. *amára.*—Stem branchy, each branch bearing a corymb of white flowers. Leaves lanceolate, cuneate, and spatulate, toothed and notched.

Derbyshire, apparently wild, between Crich and Matlock. In a meadow below Highgate, probably sprung from an outcast of some garden.

I. *umbelláta* is occasionally found wild, probably from the same cause, Old Palace Croydon.

These three genera, *Hutchinsia, Teesdália,* and *Ibéris,* may be distinguished by the form of their silicles. The first has an elliptic turgid pouch. The second has the pouch concave on one side and convex on the other. The third has the pouch more globular.

THLA'SPI.—Pouch notched, winged valves. Cells many-seeded.

T. *arvénse.*—Pouch orbicular, compressed, with a membranous wing. Leaves oblong, toothed, smooth, entire, stem-clasping. Stem simple.

Field, left side of the lane leading from Abridge to Hainault Forest, rare. Lower parts of Essex, as about Wivenhoe, common; Battersea Fields—Mr. William Pamplin.

ISA'TIS.—Pouch flat, two-valved, one-celled, one-seeded.

I. *tinctória.*—Root leaves crenated, cauline, sagittate, glaucous. Florescence panicled. Flowers yellow. Silicles pendulous.

Chalk pit, near Guildford.

COCHLEA'RIA.—Pouch sessile, ovate, globular or oblong, and turgid.

C. *officinális.*—Root leaves oval, succulent, bidentate (two-toothed.)

C. *ánglica.*—Root leaves oval, fleshy. Stem leaves amplexicaule, entire and toothless. Stem angular.

Both on the muddy banks of the Thames, &c.

C. *armorácia.*—Upper leaves linear, widely serrated. Flowers axillary and terminal.

SENEBIE'RA. Sm. (*Corónopus*).—Pouch twin, two-lobed, muricate or wrinkled. One seed in each cell.

S. *ruéllii.*—Pouch crested with sharp points. Leaves pinnatifid.

S. *dídyma.*—Pouch granulated. Flowers in small racemes. Leaves regularly pinnatifid. Strong smell. Hot taste.

Brixton Hill Road, a quarter of a mile beyond the church, right hand. Highgate Archway.

Fruit a longish round or angular pod.

CHEIRA'NTHUS.—Pod quadrangular, winged below the two-lobed stigma. Sepals close, bi-saccate (bagged) at their base.

C. *cheíri.*—Leaves lanceolate. Stem shrubby.

Walls, Beddington, &c.

NASTU'RTIUM.—Pod roundish, short, declining. Sepals equal and spreading.

N. *officinále.*—Leaves pinnate. Leaflets roundish, toothed.

N. *terréstre.*—Leaves pinnatifid, toothed. Pods curved, on short spreading pedicels.

Mitcham Common.

N. *sylvéstre.*—Leaves pinnate. Leaflets lanceolate, serrated, or incised. Root creeping.

Battersea, ditches and watery places, about the Thames, not rare.

N. *amphíbium.*—Leaves oblong, pinnatifid or serrated. A larger flowered species than *terréstre* or *sylvéstre.*

Like *Polygónum amphíbium*, it grows both in water and on land.

SISY'MBRIUM.—Pod sitting. Stigmas two, distinct or united. Sepals equal at the base, *i. e.* not bisaccate.

S. *officinále.*—Pods pressed to the stem. Leaves runcinate. Whole plant rough.

S. *sophía.*—Stems upright, tapering. Leaves bipinnate. Segments linear. Flowers yellow, very minute.

Essex, not rare. Weybridge.

S. *irío.*—Leaves runcinate, toothed. Stem smooth. Pods erect.

Near Walham Green—Mr. William Pamplin.

BARBARE'A.—Pod four-angled. Stigma small, entire. Sepals lax, equal.

B. *vulgáris.*—Lower leaves lyrate, with a roundish terminal lobe.

B. *præ'cox.*—Lower leaves like *vulgáris.* Upper pinnatifid, with entire segments.

Addiscombe road, and path over Park Hill, Croydon.

ALLIA'RIA.—Pod somewhat four-cornered.

A. *officinális.*—Leaves cordate. Pods longer than the pedicels.

Hedges, common. Easily known by its strong garlic smell.

ERY'SIMUM.—Pod four-angled. Calyx close.

I have followed Sir J. E. Smith in the separation of these genera *Ery'simum* and *Alliária.*

E. *cheiránthoides.*—Leaves lanceolate, roughish, partially toothed. Pods erect, on spreading pedicels. Flowers yellow.

Viaduct of the Southampton Railway, Wey, Surrey.

CARDAMI'NE.—Pod linear, with flat valves, nerveless. Dissepiment prominent.

C. *praténsis.*—Leaves pinnate. Leaflets of the radical leaves roundish, of the cauline, linear. Style straight. Stigma capitate.

C. *amára.*—Root leaves as in *praténsis.* Cauline toothed, angular. Style oblique. Stigma acute. Anthers violet. Flowers pure white, large. Stem more branchy, angular, and larger than that of *praténsis.*

Bog in the Wood below the Spaniards, Hampstead. A willow bog, between Weston Street and Albury Park.

Bog between Weston-street and Backheath. Ditto behind the Paper Mills, Albury.

C. *hirsúta.*—In watery places, with a rough, branchy and angular stem. In dry sandy places and on walls the stem is quite smooth and simple. Flowers very minute. Leaves pinnate.

In upland places it resembles C. *impátiens,* the chief difference being the absence of stipules in *hirsúta,* and in the roundish leaflets.

C. *impátiens.*—Leaves pinnate, with lanceolate leaflets and ciliated stipules. The siliques of both species are elastic; scattering the ripened seeds.

This species has not been observed by the author nearer the metropolis than Derbyshire, about Matlock. C. *hirsúta* abounds everywhere.

A'RABIS.—Pod linear, with roundish swelling valves. "Seeds in one row. Calyx erect."

A. *thaliána.*—Leaves slightly toothed, hairy. Stem branching, Pods long and spreading, on long filiform pedicels. Stem straight and tapering.

TURRI'TIS.— Pod linear, upright. Sepals spreading.

T. *glábra.*—Stem-leaves lanceolate, amplexicaule, smooth. Stem straight and tapering. Pedicels longish.

About Bromley, Kent. Colchester. Shere, Surrey.

T. *hirsúta.*—Leaves rough, amplexicaule. Stem rough, upright. Spike long. Pedicels short. Pods adpressed.

Near Coulsdon.

HE'SPERIS.—Pod four-sided. Stigma with connivent lobes. Calyx erect.

H. *matronális.*—Limb of the petals oval. Pods erect. Leaves oval, lanceolate, toothed.

In a hedge near Cheam—Mr. William Pamplin.

BRA'SSICA.—Pod round. Beak tapering. Calyx protuberant at the base of all the sepals, converging below, spreading above.

B. *nápus.*—Leaves smooth. Upper lanceolate, with a cordate base. Stem one to two feet. Root tapering.

B. *campéstris.*—Root leaves and stem rather hispid, slenderer than *nápus* in stem and root. Later in flowering.

B. *rápa.*—Leaves rough. Root bulbous.

SINA'PIS.—Valves undulate. Sepals spreading from the base, not protuberant.

S. *arvénsis.*—Pod rugged, angular. Beak awl-shaped.

S. *álba.*—Pod bristly, with a long flattened two-edged beak. Leaves not so rough as in S. *arvénsis.*

S. *nígra.*—Pod four-angled, smooth, closely pressed to the stem. Upper leaves entire, smooth.

S. *tenuifólia.*—Pods erect, or semi-erect, on almost horizontal pedicels, flattened, with scarcely any beak. Leaves thick, variously divided. Sometimes pinnatifid, sometimes only notched. Usually fœtid.

Rubbish, at Woolwich, common. Not rare on walls about Lambeth. Road between Kentish Town and Love Lane, rare.

RA'PHANUS.—Pod swelling and contracted as if jointed. Sepals erect, converging. Two a little prominent at the base.

R. *raphanístrum.*—Flowers large, yellow or white, with purple veins.

Order LXIX.—RESEDA'CEÆ.

Calyx many-parted. Petals unequal, lacerated, minute or deficient. Stamens definite, arising out of a large disk. Ovary three-lobed, one-celled. Many seeds attached to three parietal placentæ.

RESE'DA.—Calyx six-parted. Petals (if any) four. Stamens twelve, on the receptacle.

R. *lútea.*—Stem spreading. Leaves pinnate.

Common on chalky soils.

R. *lutéola.*—Stem virgate. Leaves linear, lanceolate.

Road between Kentish Town and the Floor Cloth Manufactory.

Order LXX.—VIOLA'CEÆ.

Sepals five. Petals five, irregular. Fruit capsular, one-celled, three-valved, many-seeded.

VI'OLA.—Sepals produced at the base. Upper petal spurred.

V. *odoráta.*—Creeping at the root. Flowers on radical peduncles. Leaves heart-shaped, glabrous.

V. *palústris.*—Peduncles as in *odoráta.* Leaves broader, quite smooth. Flowers sparingly.

Bog near Addington Hills. Great Bog, Hampstead. Bogs about Abinger, Leith Hill, Shere and Albury. Okeshot, near Esher. Cookham Common, Newbury, Berks. The two latter localities are from Mr. William Pamplin.

V. *hírta.*—Flowers as *odoráta,* on radical peduncles. Leaves and petioles hairy, finely crenated.

V. *canína.*—Stem ascending, furrowed. Leaves cordate, acute. Stipules with long teeth.

V. *flavicórnis* (Smith).—Lower petals reflexed on the spur, which is yellow and bisaccate. Sepals narrower and longer; leaves broader, darker, firmer in texture than in *canína.*

Var. *minor.*

Var. Spur double, and a sepal between them.

V. *láctea.*—Leaves oval, lanceolate, or almost lanceolate, with very pale blue, or almost white flowers.

Waterdown Forest; Tunbridge Wells—Mr. Wm. Pamplin.

V. *trícolor.*—Stem branched and spreading. Leaves deeply crenate. Stipules pinnatifid.

V. *arvénsis.*—Probably a variety of *trícolor,* with minute petals.

Cornfields.

Var. The variety of V. *arvénsis* or *trícolor,* with cordate horizontally incised leaves, and fewer flowers; is rather smoother than the common state of either of the above-mentioned species or varieties.

Shere and Albury; on sandy fields. Brasted, Kent—Mr. William Pamplin.

V. *lútea.*—Stem simple, angular. Leaves oval, oblong, ciliated. Flowers yellow.

Hilly pastures about Castleton, Derbyshire.

Upwards of 100 species of Violets are known and described.

Order LXXII.—ACERA'CEÆ.

Calyx of five divisions. Corolla five-petalled. Stamens eight or ten. Ovary compressed, two-celled, each bearing two ovules. Fruit a winged samara.

A'CER.—Fruit two samaras united at the base.

A. *campéstris.*—Leaves deeply five-lobed, cut, crenated. Racemes of flowers upright.

A. *pseudoplátanus.*—Leaves five-lobed, unequally serrated. Racemes pendulous.

Order LXXIII.—ÆSCULA'CEÆ.

Calyx five-lobed. Corolla of four or five unequal petals. Stamens seven or eight. Ovary three-cornered, three-celled, two ovules in each. Fruit three, two, or one-celled; three, two, or one-seeded, by abortion. Seeds large, roundish, covered with a thick shining coat, with a broad hilum.

Æ'SCULUS.—Petals inserted in the one-leaved inflated calyx.

Æ. *hippocástanum.*—Leaves digitate in sevens.

An exotic tree, but as common as the Chestnut, and some other reputed British species.

Order LXXIV.—RHAMNA'CEÆ.

Ovary cohering with the tube of the four or five lobed calyx. Petals five, very small. Fruit a berry, dry drupe or capsule.

RHA'MNUS.—Berry two or four celled, two or four seeded.

R. *cathárticus.*—Leaves oval, finely serrated, with four to six lateral nerves. Berries racemous, with four seeds in each.

Lonesome, near Leith Hill. Several places about Sanderstead, Purley Downs and Coulsdon.

R. *frángula.*—Leaves oboval, smooth, entire. Berries red.

Order LXXV.—CELASTRA'CEÆ.

Calyx of four or five divisions, imbricated before expansion. Petals four or five, having the stamens alternate. Fruit capsular, or a dry drupe.

EUO'NYMUS.—Capsule coloured, five-angled, five-celled, five-valved. Divisions of the capsule often four by abortion.

E. *europæ'us.*—Leaves petiolate, smooth, serrated. Flowers on flattish peduncles. Young branches green. Sepals, petals and stamens usually four.

Order LXXVII.—CARYOPHYLLA'CEÆ.—(CARYOPHY'LLEA.

Calyx monosepalous, tubular, toothed, or of four or five sepals. Corolla five-petaled. Stamens equal to, or double the number of petals. Ovary one to five-celled, with numerous ovules. The genera in this order, with a one-celled capsule, are known from *Drósera* and *Frankénia*, by the attachment of the ovules to a central placenta. It is also known from *Drósera* by the insertion of the stamens under the ovary, (i. e. *hypogy'nous.*)

* Calyx monosepalous, toothed, or cleft.

SILE'NE.—Petals with a claw, and a notched or a bifid limb. Styles three. Capsule three-celled, six-toothed, many-seeded.

S. *infláta.*—Flowers white, panicled. Calyx smooth, swelling, reticulate with veins. Petals two-cleft.

Var. *α.*—Leaves oval, smooth.
Var. *β.*—Leaves rough and ciliated.

S. *nútans.*—Petals two-parted, with linear segments. Leaves lanceolate, pubescent.

Rock on which Nottingham Castle is built. Shakspeare's Cliff—Mr. William Pamplin.

S. *marítima.*—Calyx like S. *infláta.* The petals bear a crown, (an upright petaloid growth from the throat, or upper part of the claw.) Flowers almost solitary. Leaves narrow.

Rocks by the sea, Stonehaven, &c. Below the Pest House, Seabrooke, Kent—Rev. G. E. Smith.

S. *noctiflóra.*—Leaves soft. Stem dichotomous. Calyx ten-angled. Petals bifid, obtusely crowned.

Corn fields between the Forest and Wansford; about Chelmsford, Essex.

S. *anglíca.*—Petals small, bifid. Stems erect. Leaves lanceolate. Whole plant rough and viscid.

A field right of the path from Ockham to the Hut, Surrey. Near Bromley Palace, Kent.

S. *cónica.*—Stem dichotomous. Leaves linear, lanceolate. Calyx ovate, conical, beautifully striated.

The known species of this genus are upwards of 200.

LY'CHNIS.—Calyx and corolla as in *Siléne.* Distinct from it in having five styles, and a one to five-celled capsule.

L. *floscúculi.*—Petals usually four-cleft. Capsule one-celled. A cylindric calyx with dark purple ribs. Leaves narrow, lanceolate.

A variety with white flowers.

L. *dioíca.*—Flowers diœcious. Capsule one-celled.

Var. *α.*—Flowers red.
Var. *β.*—Flowers white.

AGROSTE'MMA.—Calyx five-cleft. Petals as in *Ly'chnis,* but entire and without a crown at the throat of the corolla.

A. *githágo.*—Calyx segments very long, hairy. Flowers large, on a tall erect branching stem.

DIA'NTHUS.—Calyx tubular, monosepalous, scaly at base. Petals five, with long claws. Capsule oblong.

D. *deltoídes.*—Flowers solitary, small. Petals crenated. Calycine scales about two, oval, lanceolate, acute. Leaves flat, obtuse, slightly pubescent.

Dry, sandy, pasture fields. Teddington; Hampton; Duppas Hill, Croydon, &c.

D. *caryophy'llus.*—Flowers solitary, larger than *deltoídes.* Calycine scales very small. Leaves grooved, (canaliculate) glaucous.

Rochester Castle wall, &c.

D. *arméria.*—Flowers in trusses. Calycine scales lanceolate, hairy, as long as the tube of the calyx.

Wigmore Lane; Bromley, Kent; Croydon, &c.

The number of pinks exceeds 100.

SAPONA'RIA.—Like *Diánthus* in essential character. Differs in habit, and in the calyx being without scales.

S. *officinális.*—Like *Ly'chnis* in habit. Leaves with swollen joints. Veins more prominent.

Near the London Road, Colchester, apparently wild. About Croydon, naturalized. Near Abinger, Surrey, in a hedge between the church and Pedling Street. Hedges near the Priory, Selborne. Near Odiham—Mr. Dickinson.

* * Calyx polysepalous.

STELLA'RIA.—Sepals five. Petals two-parted. Capsule one-celled, six-toothed. Styles three.

S. *holóstea.*—Leaves lanceolate, serrated, or serrulate, keeled, margin reflexed. Peduncle very long. Sepals without nerves. Flowers large.

S. *gramínea.*—Leaves linear, entire. Stem weaker than in *holóstea.* Sepals three-nerved. Corolla about equal to the calyx.

S. *glaúca.*—Branches much divaricated. Flowers panicled, larger than *gramínea,* smaller than *holóstea.*

Battersea Marshes, &c. Croydon Canal.

S. *uliginósa.*—Leaves elliptic, lanceolate. Petals much smaller than the three-nerved sepals.

S. *média.*—Leaves oval. Corolla smaller than the hairy calyx. Stem ciliated, with alternate hairy lines.

ARENA'RIA.—Differs from *Stellária* in having entire petals.

A. *trinérvis.*—Leaves oval, acute, three-nerved. Sepals three-nerved. Petals and sepals about equal in length.

A. *serpyllifólia.*—Leaves very small, oval, and sessile. Petals shorter than the sepals. Plant rigid, recumbent.

A. *tenuifólia.*—Leaves few, linear, lanceolate, reflexed. Sepals larger than the petals. Capsule exceeding the calyx. Branchy. Branches divergent.

Chalk-pits near Coulsdon. Smitham-Bottom. Banstead Downs, in corn fields—Mr. William Pamplin.

A. *rúbra.*—Leaves linear, pointed, with scarious sheaths. Sepals lanceolate, rough, nerveless. Petals purplish, shorter than the calyx.

A. *marína.*—Leaves fleshy, cylindrical, smooth. Flowers like A. *rúbra,* but twice as large.

Thames, below Greenwich, &c., common.

The *Arenárias* described by Sprengel are 140.

CERA'STIUM.—Petals cleft. Capsule ten-toothed.

C. *vulgátum.*—Leaves oval, pale green, hairy. Stem erectish.

C. *viscósum.*—Leaves oblong, lanceolate. Plant deep green, spreading.

C. *semidecándrum.*—Capsules shorter than the calyx. In *viscósum* these are longer. Stamens only five. Petals not bifid, as in *viscósum,* but having instead a couple of notches.

A doubtful species; grows abundantly on Shere Heath.

C. *arvénse.*—Flowers as large as *Stellária holóstea.* Leaves narrow, reflexed. Stems wiry, about six inches high. It has the appearance of *Stellária,* but has cleft petals, as *Cerástium,* and not divided as *Stellária.**

Banstead Downs—Mr. Pamplin.

C. *aquáticum.*—Like *Stellária média* in habit. Differs in its ten-toothed capsule, and in having five styles. *Stellária* has three. Its habit and appearance are different from all the other *Cerástia.*

C. *aquáticum* is not rare about Chigwell, Essex. Colchester in the Colne, at Lexden, very large. Ditches about Shere, Albury, &c.

SPE'RGULA.—Known from the other genera of this section by its five-valved capsule.

S. *arvénsis.*—Leaves verticilled, linear, obtuse. Peduncles one-flowered, after flowering reflexed. Capsule twice as long as the calyx.

S. *nodósa.*—Leaves opposite, smooth. Stem short, spreading. Flowers larger than in *arvénsis.*

Battersea—Mr. Wm. Pamplin. Watery places on barren heaths.

S. *subuláta?*—Leaves opposite, awl-shaped, ciliated, and awned. Flowers on long peduncles. Very like *Sagína* in habit.

Near the top of Leith Hill.

SAGI'NA.—Sepals and petals four each. Stamens and styles ditto. Capsule one-celled, four-valved.

S. *procúmbens.*—Stems prostrate, rooting. Leaves linear, smooth, sharp-pointed. Peduncles one-flowered, longer than the leaves. Petals shorter than the leaves. Capsule longer than the calyx.

S. *apétala.*—Stems erect, somewhat hairy. Petals very minute, often deficient.

MŒ'NCHIA.—Sepals and petals four. Corolla as long as the calyx. Capsule one-celled, valveless.

M. *erécta.*—Stem one-flowered, rarely two, two to four inches high. Leaves lanceolate, acute,

Albury and Shere Heath; Hampstead Heath; Chiselhurst Common, &c.

Order LXXVIII.—CRASSULA'CEÆ.

Calyx polysepalous, or of three, five, seven, or twelve divisions. Petals or lobes of the corolla variable in number. Stamens equal in number to the petals or lobes of the corolla, rarely double the number. Pistils three to twelve, or more. Ovaries of the same number as the pistils, each bearing many ovules. Leaves fleshy.

SEMPERVI'VUM.—Calyx twelve-cleft. Petals twelve. Stamens twelve. Capsules twelve.

S. *tectórum.*—Leaves very fleshy, ciliated, keeled. Disposed like the petals of a double rose. Stem erect, leafy, being a corymb of pinkish-coloured flowers.

On roofs and walls of cottages; not uncommon.

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* The petals are said to be cleft or bifid when separated half-way to the base. They are divided or parted or partite when the separation reaches almost to the base.

COTYLE'DON.—Calyx five-parted. Corolla (monopetalous), tubular, five-cleft. Capsules five, each with a gland at its base.

C. *umbílicus.*—"Leaves peltate, crenate, depressed in the centre. Stem with a (usually) simple raceme of pendulous flowers. Upper bracts minute, entire."

"Upon a low stone wall with *Asplénium* ceterach, adjoining the point at which the Canterbury, Cheriton, Broadmead, and Folkestone roads meet. Upon the wall of the East Gate at Winchelsea"—Rev. G. E. Smith. By the way-side between Brighton and Henfield, and near Southampton, towards the forest.

SE'DUM.—Petals five. Capsules ditto. Stamens ten.

S. *teléphium.*—Leaves flat, serrated, fleshy. Stem tall, erect. Flowers purple, in leafy corymbs.

Borders of fields, about Albury, not rare. Bromley, Kent, &c.

S. *dasyphy'llum.*—Stem very slender. Leaves opposite, ovate, cylindric, obtuse, very fleshy.

On walls at Twickenham. Near Amersham, Bucks.

S. *ánglicum.*—Leaves oval, fleshy, sessile. Cyme bifid. Flowers white or pinkish.

Coast, Mersea Island, &c.

S. *ácre.*—Habit cæspitose (matted as a turf). Leaves fleshy, sessile. Cyme trifid. Flowers yellow.

On walls and sand banks, very common.

S. *sexanguláre.*—Leaves sub-ternate, tapering, fleshy, obtuse, sessile, spreading in six rows. Cyme trifid.

Greenwich Park wall—Botanist's Guide, &c.

S. *álbum.*—Leaves oblong, tapering, obtuse, glabrous, spreading. Florescence a branching panicle of white flowers.

Fulham church-yard—Mr. William Pamplin.

S. *refléxum.*—Leaves subulate, mucronate; lower, reflexed; upper, spreading. Stem erect, thick, a foot high, bearing a truss of yellow flowers.

On walls and roofs; not rare.

LXXIX.—SAXIFRAGINA'CEÆ.—(See page 198.)

Order LXXX.—BALSAMINA'CEÆ.

Sepals and petals usually five or three by cohesion, irregular. Stamens five. Ovary five-celled. Fruit capsular, with elastic valves. Herbaceous succulent plants, with entire exstipulate leaves.

IMPA'TIENS.—Sepals two. Petals four, very irregular, one horned. Anthers united.

I. *nóli-me-tángere.*—Stem succulent, with tumid joints. Leaves oval, serrated, petiolate. Peduncles many-flowered.

Thames, near Hampton Court—T. Ralph, Esq. About Albury, along the side of the rivulet for several miles, common.

appearance of *Stellária,* but has cleft petals, as *Cerástium,* and not divided as *Stellária.*[*]

Banstead Downs—Mr. Pamplin.

C. *aquáticum.*—Like *Stellária média* in habit. Differs in its ten-toothed capsule, and in having five styles. *Stellária* has three. Its habit and appearance are different from all the other *Cerástia.*

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S. *nodósa.*—Leaves opposite, smooth. Stem short, spreading. Flowers larger than in *arvénsis.*

Battersea—Mr. Wm. Pamplin. Watery places on barren heaths.

S. *subuláta?*—Leaves opposite, awl-shaped, ciliated, and awned. Flowers on long peduncles. Very like *Sagína* in habit.

Near the top of Leith Hill.

SAGI'NA.—Sepals and petals four each. Stamens and styles ditto. Capsule one-celled, four-valved.

S. *procúmbens.*—Stems prostrate, rooting. Leaves linear, smooth, sharp-pointed. Peduncles one-flowered, longer than the leaves. Petals shorter than the leaves. Capsule longer than the calyx.

S. *apétala.*—Stems erect, somewhat hairy. Petals very minute, often deficient.

MŒ'NCHIA.—Sepals and petals four. Corolla as long as the calyx. Capsule one-celled, valveless.

M. *erécta.*—Stem one-flowered, rarely two, two to four inches high. Leaves lanceolate, acute,

Albury and Shere Heath; Hampstead Heath; Chiselhurst Common, &c.

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SEMPERVI'VUM.—Calyx twelve-cleft. Petals twelve. Stamens twelve. Capsules twelve.

S. *tectórum.*—Leaves very fleshy, ciliated, keeled. Disposed like the petals of a double rose. Stem erect, leafy, being a corymb of pinkish-coloured flowers.

On roofs and walls of cottages; not uncommon.

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SE'DUM.—Petals five. Capsules ditto. Stamens ten.

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Borders of fields, about Albury, not rare. Bromley, Kent, &c.

S. *dasyphy'llum.*—Stem very slender. Leaves opposite, ovate, cylindric, obtuse, very fleshy.

On walls at Twickenham. Near Amersham, Bucks.

S. *ánglicum.*—Leaves oval, fleshy, sessile. Cyme bifid. Flowers white or pinkish.

Coast, Mersea Island, &c.

S. *ácre.*—Habit cæspitose (matted as a turf). Leaves fleshy, sessile. Cyme trifid. Flowers yellow.

On walls and sand banks, very common.

S. *sexanguláre.*—Leaves sub-ternate, tapering, fleshy, obtuse, sessile, spreading in six rows. Cyme trifid.

Greenwich Park wall—Botanist's Guide, &c.

S. *álbum.*—Leaves oblong, tapering, obtuse, glabrous, spreading. Florescence a branching panicle of white flowers.

Fulham church-yard—Mr. William Pamplin.

S. *refléxum.*—Leaves subulate, mucronate; lower, reflexed; upper, spreading. Stem erect, thick, a foot high, bearing a truss of yellow flowers.

On walls and roofs; not rare.

LXXIX.—SAXIFRAGINA'CEÆ.—(See page 198.)

Order LXXX.—BALSAMINA'CEÆ.

Sepals and petals usually five or three by cohesion, irregular. Stamens five. Ovary five-celled. Fruit capsular, with elastic valves. Herbaceous succulent plants, with entire exstipulate leaves.

IMPA'TIENS.—Sepals two. Petals four, very irregular, one horned. Anthers united.

I. *nóli-me-tángere.*—Stem succulent, with tumid joints. Leaves oval, serrated, petiolate. Peduncles many-flowered.

Thames, near Hampton Court—T. Ralph, Esq. About Albury, along the side of the rivulet for several miles, common.

Sub-Section 2.—Stamens definite, united by the filaments.

Order LXXXI.—GERANIA'CEÆ.

Calyx of five sepals, or in five divisions. Corolla of five petals, (in some genera slightly irregular). Stamens double the number of petals, sometimes fewer by abortion. Fruit five one-seeded carpels on a beaked receptacle. Styles united.

GERA'NIUM.—Sepals and petals regular. Carpels with a long, simple awn.

G. *robertiánum.*—Leaves ternate or quinate, with pinnatifid leaflets. Calyx angular, hairy. Colour of the plant reddish. Smell strong.

The white-flowered variety grows near the Iron Railway, Merton. Lane near Mr. King's farm, Merstham—James Turner, Esq.

G. *mólle.*—Leaves roundish, lobed, cut, hairy or downy. Petals notched, scarcely longer than the calyx. Capsule corrugated, smooth, glabrous.

G. *rotundifólium.*—Peduncles shorter than the petioles. Flowers small, rose-coloured. Calyx rough.

G. *pusíllum.*—Sepals oval, pointed, rough, short, lax. Petals striated, pink. Leaves incised. Differs both in flower and leaf from *mólle* and *rotundifólium.*

G. *disséctum.*—Peduncles two-flowered, shortish. Flowers small, pink, smaller than the calyx. Leaves multifid, spreading, divisions linear. Sepals awned.

G. *columbínum* —Leaves deep green, multipartite. Segments linear. Stems reddish. Peduncles very long. Calyx prismatic. Sepals striated, longer than the petals.

On chalky soils ; not rare.

G. *lúcidum.*—Leaves trifid, orbicular, shining. Calyx prismatic. Stem red and shining.

Mortlake ; Croydon ; Guildford.

G. *pyrenáicum.*—Petals much larger than the calyx, which is rough and three-ribed. Leaves orbicular, five-lobed. Lobes cut. Stem two feet high, straggling.

Near the Railway at Mitcham. Battersea Fields. Beddington.

G. *sanguíneum.*—Flowers large, blood-red. Peduncles one-flowered. Leaves roundish, five-parted, with trifid divisions.

In pastures between Tideswell and Chee Torr, and probably in places nearer the Metropolis.

G. *praténse.*—Petals very large, blue, or purple. Capsules hairy. Stamens smooth. Peduncles two-flowered. Leaves about seven-parted, incised.

A meadow near Moulsey Hurst.

ERO'DIUM.—Differs from *Gerânium* in having but five stamens and a spiral beak.

E. *cicutárium.*—Leaves alternately pinnate, pinnatifid incised. Leaflets sessile.

Waste sandy places.

E. *moschátum.*—Leaflets sub-petiolate.

Bromley Common, close to the lane leading from the London Road to Wigmore. A rare species. Barnes—Mr. William Pamplin. Beside Wickham Park.

E. *marítimum.*—About three-flowered. Leaves simple, cordate, incised, rough, on long petioles. Stem prostrate.

Coast of Sussex—Mr. William Pamplin. On the walls of Sandgate Castle—Rev. G. E. Smith.

Order LXXXII.—OXALA'CEÆ.

Petals and sepals five. Distinct from *Geraniáceæ* by its separate styles, and by its capsular five-celled many-seeded fruit.

O'XALIS.—"Petals slightly united at the base. Capsule angular, two-seeded. Seeds with an arillus."

O. *acetosélla.*—Leaves ternate, radical, obcordate, on long petioles. Root scaly.

A prostrate, stemless plant.

O. *corniculáta.*—" Stem upright, branchy. Florescence umbellate. Flowers yellow."

The latter is a common weed in Albury Park Gardens. It is also occasionally found in other gardens of the village. The other species is common in woods, and easily distinguished from this by its white flowers and acauline habit.

Order LXXXIII.—LINA'CEÆ.

Like the two tribes above; but differs from them in its five to ten-celled capsule, with one to two seeds in each cell.

LINU'M.—Calyx five-cleft. Petals, stamens, and styles five. Capsule globular, ten-celled. Seeds compressed.

L. *usitatíssimum.*—Leaves lanceolate, alternate. Sepals acute, three-nerved. Petals crenated.

L. *cathárticum.*—Leaves opposite, oblong. Stem dichotomous. Petals small, acute.

On commons; not rare.

L. *angustifólium.*—" Leaves linear, lanceolate, acuminate, three-nerved. Sepals elliptical, three-ribbed, mucronate as well as the capsule."

On the cliff edge, a little west of Pegwell, near Ramsgate—Rev. G. E. Smith.

RADI'OLA.—Petals four. Capsule eight-valved, eight-celled. Calyx multifid.

R. *millegrána.*—About one or two inches high. Dichotomous, bushy, smooth, bearing numerous flowers.

Wandsworth Common; Weybridge Common; Albury, on wettish sandy wastes; Shirley Park, &c.

Order LXXXIV.—POLYGALA'CEÆ.

Calyx four to five sepals. Corolla two to five petals. Stamens eight, constituting a laterally cleft tube. Ovary of two cells, rarely one to three celled. Style simple. Stigma two-lobed. Fruit capsular or drupaceous.

POLY'GALA.—Sepals five, winged and coloured. Petals united with the filaments. Lower petal keeled.

P. *vulgáris.*—Stem procumbent. Leaves linear, lanceolate. Flowers in terminal racemes, white, blue, or pink.

The known *Poly'galas* are about 170.

Order LXXXV.—FUMARIA'CEÆ.

Sepals two. Petals four, irregular, the upper terminating in a kind of spur. Stamens six in two parcels (diadelphous). Ovary one-celled, with one or more ovules. Leaves decompound, laciniated.

FUMA'RIA.—Upper petal terminating in a blunt spur (gibbous). Seed one.

F. *officinális,*—Flowers in loose spikes. Leaves bipinnate.

The following is probably a variety of this.

F. *capreoláta.*—Petioles contorted. Flowers carnation, dark purple and green tips. Sepals toothed.

Banks, &c., not rare.

F. *parviflóra*—"Sepals very minute. Fruit globose, slightly pointed. Bracts at first as long as the flower; afterwards about as short as the fructiferous pedicel. Leaflets linear, channelled. Flowers rose-coloured. Leaves of a lively or yellowish green."

"Var. Flowers white, tipped with dark purple. Leaves glaucous."

"Woldham, near Rochester, and near Epsom (no authority quoted.)

"Var. (*Leucántha.*) Brookham, Surrey—Rev. J. Dalton."—Hooker's Flora.

CORYDA'LIS.—"Pod two-valved, compressed, many-seeded."

The character of the fruit sufficiently distinguishes this tribe from *Fumária*, from which it has been lately separated.

C. *lútea.*—Seed vessel siliquose. Flowers bright yellow. Root fibrous.

On an old brick wall at West Ham. Abundant on the Rev. R. Lindsey's Garden wall, Ealing. On brick walls, Beddington.

C. *claviculáta.*—Leaves in threes and fives, glaucous, elegant. Flowers whitish, with green tips.

Woods, Albury. Gravelly parts of Kent and Surrey, not rare. Near Colchester.

Order LXXXVI.—LEGUMINO'SÆ.

Calyx five-toothed, cleft, or parted, or polysepalous. Corolla five-petaled. Stamens ten or more, usually diadelphous. Ovary one-celled, with one or more ovules attached to the inner suture. Fruit a legume (one-celled pod.) Petals irregular (papilionaceous) or regular, sometimes apetalous, *i. e.* destitute of petals.

Leaves pinnate.

O'ROBUS.—Style cylindric. Calyx obtuse at the base.

O. *tuberósus.*—Three or four pairs of lanceolate leaflets. Stipules toothed at the base. Stem simple. Roots tuberous.

Woods, common.

LA'THYRUS.—Style flat, increasing in breadth upwards.

L. *praténsis.*—Leaflets two, lanceolate, mid-rib terminating in a tendril. Stipules arrow-shaped, as large as the leaves.

Meadows and hedges.

L. *sylvéstris.*—Leaves ensiform (sword-shaped). Stem winged. Flowers large, purple.

Brigstock wood, and Milton woods, Northamptonshire, abundant.

L. *latifólius.*—The perennial sweet-pea of gardens. Differs from *sylvéstris* chiefly in having elliptic leaves, and in being of a larger size.

Either this or the preceding was gathered in September, 1837, in the border of a wood, by the path through the Long Lith, Selborne, which locality was indicated by the Rev. G. White, in the History of Selborne, many years ago.

L. *nissólia.*—Leaves grassy. Peduncles very long, one to two flowered.

About King's Road, near Clapham. Tamworth Lane Brickfield, Streatham. Corner of a field near Mr. Vince's Farm, Lexden, Essex.

L. *áphaca.*—Leafless. Stipules very large, sagittate and cordate.

London Road, near Lord Braybrooke's Park, Essex. Gathered several years ago in Battersea Fields.

VI'CIA.—Style bearded below the stigma.

V. *sylvática.*—Peduncles long, many-flowered. Florescence lax. Leaves multijugate, equal, ending in a long tendril. Leaflets oboval, elliptic. Plant large, quite smooth. Flowers white.

Woods, Matlock, Derbyshire.

V. *crácca.*—Florescence imbricated on many-flowered peduncles. Leaflets lanceolate. Stipules semi-sagittate. Flowers violet, in unilateral racemes. Calyx coloured.

V. *sépium.*—Flowers in fours. Leaflets oval, obtuse. Calyx hairy. Florets vary from two to five.

Var. Flowers pure white, near the Vicarage, Hendon.

V. *satíva.*—Florets sessile, in twos, with striated helmets. Stipule toothed, black spotted. Leaflets blunt or notched.

Var. Blossoms large, red, or purplish.

A variety with single flowers and narrow leaves. The *angustifólia* of some authors.

Woods, not rare.

V. *lathyróides*.—"Flowers sessile, solitary. Leaflets in three pairs; lower retuse. Stipules entire."

Albury Park, not uncommon. Differs but slightly from V. *sátiva*, and less from its kindred species *angustifólia*. "Chiefly known by its procumbent stem, the three pairs of leaflets, and simple tendril."—Hooker's Flora.

E'RVUM.—Segments of the calyx long, linear, acute. Pod oblong.

E. *hirsútum*.—Stem glabrous. Peduncles many-flowered. Legumes hairy, two-seeded. Leaflets linear, truncate.

E. *tetraspérmum*.—Peduncles two-flowered. Legumes hairy, four-seeded.

Cornfields; a troublesome weed.

ORNI'THOPUS.—Legume jointed, curved. Leaves with an odd or terminal leaflet.

O. *perpusíllus*.—Leaflets six to nine pairs. Flowers capitate, small, three to four on long branches. Legumes woolly.

HIPPOCRE'PIS.—Legume flattish, curved like a horse shoe, articulated.

H. *comósa*.—Flowers pedunculate, closely and circularly arranged; like *Lótus*, though differently disposed. Stem prostrate, smooth.

On chalky pastures. Shere, &c.

HEDY'SARUM.—Legume jointed, one-seeded, compressed. Keel of corolla very obtuse.

H. *onóbrychis*.—Legumes one-seeded. Florescence spicate. Stem long, decumbent.

Near Bromley, Kent. Abundant on the chalky downs about Croydon, Albury, &c.

ASTRA'GALUS.—Legume almost two-celled.

A. *glycyphy'llus*.—Legumes almost three-angled, arcuate. Leaflets oval. Flowers yellowish.

A large, prostrate, straggling plant.

Finshade, Northamptonshire. Cobham, Kent. Warwick wood, near Merstham.

A. *hypoglóttis*.—Leaflets small, oval, multijugate, with a terminal one. Florets capitate, large, violet.

An upright, small, elegant plant.

Chalky downs, Newmarket.—Mr. William Pamplin.

Sprengel describes about 250 species belonging to this genus.

Leaves simple, rarely ternate.

GENI'STA.—Calyx two-lipped; upper, two-toothed; lower, three-toothed.

G. *scopária*.—Leaves ternate, or simple. Flowers large, on short peduncles. Branches angular.

G. *tinctória*.—Leaves lanceolate, glabrous. Branches roundish. Flowers in racemes.

Meadows near Abridge, Essex. Kingsbury, Middlesex. Clandon, Surrey, &c.

G. *ánglica.*—Branches spiny. Leaves oval, lanceolate, smooth.
On hills and heaths, common.

U'LEX.—Calyx of two sepals. Legume turgid, scarcely longer than the calyx.

U. *europæ'us.*—Branches erect. Bracts of the calyx oval and lax.

U. *nánus.*—Corolla nearly included in the calyx, which is quite smooth and coloured. Spines long, slender, deflexed.

Easily known from the former, by its dwarfish size and prostrate habit.

Shere and Albury Heaths.

ONO'NIS.—Calyx five-cleft. Segments linear. Legume sitting.

O. *arvénsis.*—(or *repens* of some authors.)—Stem rooting, spreading. Lobes of calyx longer than the pods. Smell very fœtid.

O. *arvénsis.*—Var. β.—Stem erect, spiny. Lobes of calyx shorter than in Var. *a.*

* * * Leaves ternate.

TRIFO'LIUM.—Flowers capitate. Legume not longer than the calyx, usually shorter, indehiscent (not opening of itself), with one or several seeds.

T. *ornithopodioídes.*—"Flowers about three together. Legumes uncovered by the persisting calyx, with about eight seeds. Leaflets obcordate, toothed at the extremity. Stems decumbent."

Upon the grassy flat, near the Boat-house, Sandgate; and elsewhere upon the coast, frequent—Rev. G. E. Smith.

This plant does not correspond with the character of *Trifólium.*—Dr. Lindley describes it under the genus *Trigonélla.*

T. *répens.*—Stem creeping. Leaflets obcordate. Florets umbellate, or a lax head on long pedicels; persisting and pendulous.

Var. Florets viviparous, and sometimes proliferous.

T. *fragíferum.*—Florets larger than *répens*, white or pink. Peduncles very long. Calyces enlarging like a vesicle, and altogether forming a head like a strawberry.

Wet places on Mitcham Common.

T. *praténse.*—Flowers rosy, in dense heads. Calyx teeth equal, very long. Stipules oval, broad, awned.

Var. Flor. albo, Woodcot Downs.

T. *médium.*—Florescence laxer than in *praténse.* Stipules narrow, subulate. Stem bent and zigzag between the joints. Leaves more elliptic than *praténse.*

T. *marítimum.*—Stems erectish. Leaves oboval. Stipules lanceolate. One of the calyx segments broad and leafy, others equal. Flowers largeish, pink.

T. *stellátum.*—"Heads terminal, globose, stalked, hairy. Calyx teeth longer than the corolla, at length dilated, veined, and spreading; its tubes closed with hairs. Stipules broadly oval, crenate, ribbed. Leaves obcordate."

"Between Shoreham and the sea in great plenty"—Hooker's Flora.

T. *arvénsis*.—An upright woolly or downy plant. Leaflets elliptic. Calyx teeth setaceous, very downy. Stipules setaceous.

T. *striátum*.—Plant hairy. Heads sessile. Calyx striated, densely hairy. Calyx teeth equal. Petioles longish. Leaflets oboval.

Bromley Common; Smitham Bottom; Shere Heath, &c.

T. *scábrum*.—Flowers purplish, lateral and terminal. Calycine teeth rigid, persisting, recurved.

Near Bayswater (1834); Mitcham Common.

T. *suffocátum*—Is distinguished from *striátum* and *scábrum* by its subterranean habit, the stems being buried in the sand, and the heads appearing nestled in it. The calyx teeth are recurved, acute, and longer than the corolla.

Essex coast, among the sand, not rare.

T. *subterráneum*.—Heads of florets lax, three to four, upright, white. Stems mostly underground. Fruit reflexed, crowned by the receptacle and a number of abortive florets or seed vessels.

St. Martha's Hill, Guildford; Combe and other places about Croydon.

T. *procúmbens*.—Upper petal deflexed, furrowed, toothed. Pod longer than the calyx. Florets bright yellow. Heads conical, on longish peduncles.

T. *mínus*.—Upper petal flat or nearly so. Petioles very short.

T. *filifórme*.—Capitules of few florets. Upper petal flat. Leaves and leaflets sessile.

Obs. Sir William J. Hooker considers *minus* a variety of *filiforme*. The *Tréfoils* amount to nearly one hundred and fifty known species.

MELILOTUS.—Legume longer than the calyx. Petals distinct, deciduous. Florets racemose. In *Trifólium* the legume is shorter than the calyx, the petals are mostly combined and persisting, and the floresecence is capitate.

M. *officinális*. — Flowers racemous, bright yellow. Legumes longer than the calyx, elliptic, two-seeded. Stems tall, branching, upright.

In bushy places; brickfield, Tamworth Lane, Mitcham; scrubby places, Ranmer common.

M. *leucántha*.—"Differs from the last species chiefly in the inequality of the petals and the white flowers.

"Putney—Rev. G. E. Smith. Chipstead, Surrey—J. S. Mills, Esq."—Hooker's Flora.

Near Mickleham—Mr. William Pamplin.

LOTUS.—Legume cylindric. Calyx tubular. Style straight, awl-shaped.

L. *corniculátus.*—Stems recumbent. Legumes spreading. Filaments broad.

L. *májor.*—Stems erect, hollow. Legumes drooping. Filaments shorter, not broad. Calyx and calyx teeth very hairy.

ANTHY'LLIS.—Calyx inflated, enclosing the legume. Florescence capitate.

A. *vulneraria.*—Bracts digitate, or ternate, or quaternate. Calyx inflated. Florets capitate, sessile. Stem prostrate.

Chalky downs, borders of chalky fields, chalk pits, common. Rare on gravelly and sandy places.

MEDICA'GO.—Legume twisted like a screw, compressed.

M. *falcáta.*—"Stems decumbent, nearly glabrous. Leaflets oval, oblong, toothed. Peduncles racemed. Legumes falcate (sickle-shaped), and very slightly twisted, glabrous."

"This plant was gathered by a party of young botanists, with *Siléne noctiflóra,* and *Antirrhínum* (*Linaria*) *spúrium* (*spúria*), at Dumpton Gap, near Ramsgate"—Rev. G. E. Smith.

M. *satíva.*—Florescence racemous or capitate, on branching peduncles. Flowers violet. Legumes hairy.

Dorking, chalk pits. In a broad hedge, opposite Betchworth Castle, right side of the road, between Dorking and Reigate. Northfleet, &c., Kent.

M. *lupulína.*—Legumes black, kidney-shaped, wrinkled. Stems prostrate. Flowers bright yellow. Plant hairy.

M. *maculáta.*—Leaflets spotted, obcordate. Stem hairy. Peduncles with about three yellow florets.

M. *mínima.*—Leaflets oboval. Legumes two to three on one peduncle, globular, rough, with divaricating hooked spines. Whole plant densely pubescent.

A plant, from South Kent, was sent me by my excellent friend Mr. William Pamplin.

Between Sandwich and Pegwell—Rev. G. E. Smith.—Hooker's Flora.

M. *denticuláta.*—"Almost glabrous. Leaflets obcordate. Stipules laciniated. Peduncles two to five-flowered. Legumes broad, loosely spiral and flat, with one to three convolutions, reticulated; the margin thin, keeled with a double compact row of subulate curved prickles."

About Romney, and between Romney and Rye—Rev. G. E. Smith.

N.B.—Berberidáceæ and part of Sanguisorbíneæ, viz.—*Alchémilla* and *Sanguisórba,* with *Myosúrus* (Ranunculáceæ) have definite stamens.

Sub-Sect. 3.—Stamens indefinite, free, or united.

Order LXXXVII.—HYPERICA'CEÆ.

Calyx four to five-parted. Corolla four to five-petaled. Stamens usually in parcels, polydelphous. Sometimes monadelphous, rarely free. Fruit a many-celled, many-seeded capsule or berry.

HYPE'RICUM.—Calyx five-parted. Petals five. Filaments in three to five parcels. Styles two, three, or five. Cells of an equal number.

H. *calycínum.* — Shrubby, creeping. Sepals roundish, blunt. Styles five. Stem branchy and four-angled.

Naturalized in various parts, not indigenous.

H. *androsæ'mum.*—Fruit a capsular black berry. Stem upright, shrubby. Leaves sessile, oval, broadly lanceolate, blunt. Flowers large, bright yellow.

Hainault Forest, on the hedge bank, left of the Romford road which leads through the forest from Abridge to Romford; the hedge separates the Havering side of the forest from the fields. Near Lonesome, Leith-hill, under a hedge on the right of the path leading from the low boggy ground to Cold Harbour. Hedge on the west side of Bergholt heath, Essex.

H. *perforátum.*—Stem roundish, rather flattened. Leaves elliptic, obtuse, with pellucid dots.

H. *dúbium*?—More slender and handsome than *perforátum,* more bushy. Leaves blunt, less pellucid. Sepals shorter. Capsules triquetrous. Branches and stem purple, slightly angular.

Woodcote, in path to Hungry Bottom. A variety of H. *perforátum*?

H. *hirsútum.*—Stem branchy, erect, hairy, with hairy oval leaves and glandular serrated calyx.

A more bushy and less elegant plant than *montánum.* Borders of fields and hedges.

H. *montánum.*—Stem upright. Branches brachiate, alternate. Segments of the calyx beautifully serrated with black teeth.

An elegant plant. On chalky hills, common.

H. *quadrángulum.*—Stem four-angular, winged, strong, upright, branchy. Leaves sessile, oval. Calyx sepals not fringed.

Bogs, not rare.

H. *púlchrum.*—Sepals serrated with black glandular fringes. Stem erect, round. Leaves oval.

Woods and commons, not rare.

H. *humifúsum.*—Stems weak, prostrate. Leaves obtuse, glabrous.

Wet pastures and woods, not very common.

H. *elódes.*—Stems tapering, hairy, prostrate, rooting (*repens*). Leaves orbicular, sessile, hairy like the stem. Flowers few, yellowish.

Cold Harbour, Lonesome, &c., Leith hill. Addington hills. Hayes Common, &c., not rare.

H. *barbátum,* a Scottish species, is distinguished from H. *montánum* by its sub-angular stem. Glabrous leaves, with black punctures visible on both sides.

Woods and bushy places.

The genus *Hypéricum* contains nearly 150 known species.

Order LXXXVIII.—MALVA'CEÆ.

Calyx three to five-parted. Corolla five-petalled, with a spiral æstivation. Stamens uniting by their filaments, and forming a tube around the ovary and styles. Fruit of one or several-seeded carpels, united circularly round an axis. Sometimes capitate, forming a many-seeded capsule.

MA'LVA.—Calyx double. Outer of three leaflets. Styles several. Capsules (carpels) numerous, arranged round the axis.

M. *sylvéstris.*—Stem spreading. Leaves with seven acute lobes.

M. *rotundifólia.*—Stem prostrate. Leaves roundish, cordate, five-lobed.

M. *moscháta.*—Stem upright. Radical leaves, with five to seven deeply-cut lobes. Stem leaves five-parted, pinnatifid. Leaflets of the outer calyx linear.

Var. β. White flowers.

ALTHÆ'A.—Calyx double. Outer nine-cleft, Fruit like the former.

A. *officinális.*—Leaves entire, five-lobed, of a velvety texture. Stems upright.

Halling, on the Medway. Naturalized in a lane leading up to the Woodhouse, Hornsey, from Newington.

A. *hirsúta.*—" Leaves cordate, rough with hairs; lower obtusely, upper acutely lobed, crenated. Stem hispid. Peauncles single flowered, longer than the leaves.

" Between Cobham and Curton, Kent—Rev. Prof. Henslow."—Hooker's Flora.

Order LXXXIX.—TILIA'CEÆ.

Calyx four to five sepals or parted. Corolla four to five-petalled. Stamens free. Ovary two to ten-celled, each cell containing several ovules, attached in two rows to the inner angle. Style simple. Fruit capsular or drupaceous.

TI'LIA.—Calyx five-parted. Corolla five-petalled. Ovary five two-seeded cells. Fruit one-celled by abortion, one to two-seeded.

T. *grandifólia.*—" Leaves large, downy. Umbels three-flowered. Fruit woody, downy, with prominent angles."

Dorking, Hampstead, &c.

T. *europæ'a.*—Leaves smaller, glabrous. Cyme many-flowered. Cyme stalk bracteated.

A common tree.

T. *parvifólia.*—Leaves smaller, glaucous underneath.

Belt of trees on the London road, right hand, near Downshire hill, Hampstead.

Order XCI.—CISTINA'CEÆ.

Corolla five-petalled, rumpled, caducous. Stamens many, free. Ovary globular, five to ten-celled, rarely of one cell. Style and stigma simple. Fruit enclosed in the persisting calyx. Seeds many.

HELIA'NTHEMUM.—Sepals five, two smaller. Capsule three-valved, many-seeded.

H. *vulgáre.*—Stem procumbent. Leaves elliptic, oblong, margin revolute.

The variety with lanceolate petals grows about Croydon, Surrey. "It is the *Surrejánus* of the English Flora. Mr. Christy, (see Hooker's Flora) proves it by culture to be a variety, or rather a monstrosity of H. *vulgáre*, with imperfect petals."

This genus comprehends 124 known species.

Order XCII.—PAPAVERA'CEÆ.

Calyx of two, very rarely of three, concave caducous sepals. Corolla four to six petals. Æstivation plicate or rumpled. Ovary ovate, globular or linear, one-celled, many ovules attached to placentas or false dissepiments. Fruit crowned by the discoid stigma. Herbs abounding with a milky juice.

PAPA'VER.—Sepals two. Petals four. Capsule globular, opening under the permanent radiating stigma.

P. *rhéas.*—Calyx rough. Capsule glabrous, globular. Stem hispid, with spreading hairs.

P. *argemóne.*—Stem hairy and rigid. Leaves pinnate, pinnatifid, laciniated. Pistil or ovary hairy, clavate.

P. *dúbium.*—Stem reddish. Leaves as *argemóne*. Hairs of peduncle adpressed. Stigma six to eight radii.

Var. Petals white or light orange.

P. *hy'bridum.*—Capsules very hispid, furrowed. Leaves multifid. Segments flat. Stamens violet. Pollen blue.

Fields beyond Duppa's hill, Guildford and Shere, &c.

P. *somníferum.*—Calyx and leaves smooth, glabrous, glaucous. Leaves incised, not pinnatifid.

Banks, Physic Gardens, Mitcham.

CHELIDO'NIUM.—Fruit a linear one-celled two-valved pod.

C. *május.*—Flowers yellow. Petals elliptic, entire. Leaves brittle, juice yellow.

Var. Flowers double or semi-double.

GLA'UCIUM.—Calyx two sepals. Fruit a two-celled pod.

G. *lúteum.*—Silique rough, with tubercles. Flowers yellow, large. Root leaves lyrate. Stem smooth, glaucous.

Near Shoreham, Colchester, &c., on banks and on the shore.

G. *violáceum.*—Leaves bipinnate or pinnated and pinnatifid, with linear segments. Plant smooth. Flowers violet.

G. *phœniceum.*—Cauline leaves pinnatifid or incised with toothed segments. Plant rough. Flower scarlet.

I had cultivated specimens of both these from Mr. Pamplin. The latter is stated to have been found in Portland island and in Norfolk. The former in Norfolk and Cambridgeshire;—Hooker writes—"only in cultivated ground, and probably introduced."

Order XCIII.—NYMPHÆA'CEÆ.

Sepals four to six. Petals many. Stigmas discoid, radiating, crowning the ovary. Rays equalling the number of cells. Ovules many. Fruit fleshy.

NYMPHÆ'A.—Sepals four to five. Petals inserted upon the ovary below the stamens.

N. *álba.*—Leaves cordate. Flowers white.

Ford in the Rhoding, between Chigwell and Loughton, Essex.

NU'PHAR.—Petals inserted upon the receptacle. Stigma expanded over the ovary.

N. *lútea.*—Sepals five. Petals reflex. Flowers yellow.

In rivers, not rare.

Order XCIV.—RANUNCULA'CEÆ.

Calyx definitely polysepalous. Corolla indefinitely polypetalous. Fruit either a collection of acheniums (achenia), forming a capitule or kind of spike; or consisting of several capsules, either distinct or united, opening by the inner suture, which bears the seed. Leaves alternate, sheathing.

* Perianth single.

CLE'MATIS.—Perianth four to six pieces. Carpels terminated by a long, often feathery awn.

C. *vitálba.*—Stem woody, climbing. Leaves pinnate, with cleft or lobed leaflets.

THALI'CTRUM.—Perianth four to five pieces. Pericarps not awned.

T. *flávum.*—Stem erect, furrowed. Leaves bipinnate, with trifid leaflets.

Meadows by the Rhoding, near Chigwell, Essex. Banks and meadows on the Thames, Battersea fields—Thomas Ralph, Esq.

T. *alpínum.*—Stem a span high, almost leafless. Root leaves biternate.

Castle of the Peak, Derbyshire. The author has not observed it growing naturally nearer the metropolis than this county.

ANE'MONE.—Perianth five to fourteen pieces, with a trifid or three-leaved involucre at some distance from the flower. Scapes usually one-flowered.

A. *pulsatílla.*—Flowers large, handsome. Perianth of six pieces.

Pericarps with long feathery silky awns, by which it is known from all the British *Anémones*.

Streatly Downs, Berks—Mr. William Pamplin.

A. *nemorósa*.—Leaves and involucre ternate and cut. Carpels without awns. Flowers whitish.

A. *appennína*.—Leaves triternate. Perianth twelve to fourteen pieces. Known by the ligulate pieces of the perianth, which are bright blue.

Earl Spencer's park, Wimbledon. In this locality the white flowered variety is found.

HELLE'BORUS.—"Perianth of five pieces. Nectaries tubular, bilabiate."

H. *fœ'tidus*.—Perianthine pieces conniving, with dull purplish tips. Leaves dark green, pedate.

Rockingham forest, near Wansford. High Laver, Essex, a long-known locality, where it grows still in abundance, under a hedge in a rough bushy waste place, a little distance beyond the church. Chalk pits, Purfleet, Essex.

H. *víridis*.—This species is distinguished from the preceding by its deciduous habit, *i. e.* the stem and leaves decaying annually, whereas H. *fœ'tidus* is an evergreen. Also by the fewer flowers with a divergent perianth.

In a copse a little way beyond the Fox, Ranmer Common, near Dorking.

CA'LTHA.—Fruit several, radiating. Capsules with many seeds in each.

C. *palústris*.—Stem prostrate. Leaves cordate, crenate. Flowers large, yellow.

DELPHI'NIUM.—"Perianth of five pieces, one spurred. Nectary two-cleft, sessile."

D. *consólida*.—Flowers violet, solitary. Leaves linear, many-parted.

Fields about Newmarket, among the corn. Not rare in Cambridgeshire. Cornfields, in Essex, especially towards the coast.

AQUILE'GIA.—Pieces of the perianth five. Nectaries five; lower one furnished with a spur.

A. *vulgáris*.—Nectary incurved. Flowers violet blue and pinkish. Leaves biternate. Smooth plant.

Woods in Kent, near Erith. Rockingham Forest, near Oundle.
Wood above Cold-harbour, Shere; rare.

Perianth double.

MYOSU'RUS.—Florescence spicate, with a common calyx. Petals five, with tubular claws. Pericarps many.

M. *mínimus*.—Florets in very close spikes, two to four inches long, rigid. Scapes wiry.

About Colchester; not rare. Cultivated ground in Wimbledon Park; plentifully—Mr. William Pamplin.

ADO'NIS.—Calyx of five sepals. Petals five to ten. Pericarps numerous.

A. *autumnális*.—Calyx purple, downy. Petals concave, scarlet. Seed-vessels ovate, pointed.

Chalky cornfields, near Dartford; not uncommon.

FICA'RIA.—Petals many, elliptic. Fruit as *Ranunculus*.

F. *ranunculoídes*.—Leaves cordate, entire, petioled, smooth, shining.

Meadows, &c.

RANU'NCULUS.—Sepals five. Petals five or more, each with a pore at the base, covered by a scale. Pericarps awnless.

† Leaves simple.

R. *flámmula*.—Stem procumbent, spreading. Leaves oval, lanceolate, obtuse. Whole plant smooth and shining.

Wet places.

R. *língua*.—Leaves lanceolate, acuminate. Stem erect. Flowers large. Whole plant two to three times the size of the preceding.

Deptford Marshes. Fens of Hunts and Cambridge; not rare.

† † Leaves divided.

R. *auricomus*.—Root leaves three-parted, crenated. Calyx coloured. Petals fugacious.

Woods and hedges.

R. *scelerátus*.—Lower leaves petioled, palmate; upper sessile, palmate. Fruit ovate, in a longish spike or capsule. Leaves smooth and shining.

In ditches and other miry places. A very acrid plant.

R. *bulbósus*.—Calyx reflexed. Peduncles furrowed. Root bulbous.

Pastures and meadows.

R. *hirsútus*.—Calyx reflexed. Stem erect, succulent, brittle, rough, with spreading hairs. Leaves light green. Petals often more than five. Root fibrous, annual.

Not common. Abundant in cornfields about Colchester, and other places in Essex. Cornfields between Wimbledon and Kingston—Mr. William Pamplin.

The variety *párvulus* (Flor. Brit.) is not rare about Colchester.

R. *répens*.—Calyx spreading. Peduncles furrowed. Root creeping.

R. *ácris*.—Calyx spreading. Peduncles round, tapering. Upper leaves linear.

R. *parviflórus*.—Stem and leaves smooth and shining, not striated. Lower leaves trifid, roundish, lobed; upper divided to the base. Segments spatulate, jagged, toothed, digitate. Petals smaller than sepals, generally deficient. Stamens not numerous.

Rare. Battersea, Wandsworth, Mitcham and Ewell—Mr. Wm, Pamplin. Near Woodside, Croydon, in the ditch under the hedge on the right hand, in the first field through which the path passes from Woodside to Addiscombe.

R. *arvénsis.*—Leaves smooth, ternate, laciniate, three-parted. Seed-vessels muricated with prickles.

Cornfields.

R. *hederáceus.*—Leaves roundish, reniform, with entire smooth lobes. Stem creeping. Flowers white.

Miry places.

R. *aquátilis.*—Leaves under water capillary; upper floating, round, three-lobed, cleft. Flowers white, floating.

Var. Semi-double.

R. *répens*, *bulbósus*, and *ácris*, are found with double and semi-double flowers.

160 known species belong to this genus.

Order XCV.—BERBERA'CEÆ.

Sepals three to six, deciduous in a double row. Petals as many, or twice as many. Ovary one-celled, with several ovules. Fruit berried or capsular. Shrubs or herbaceous plants, with alternate compound leaves.

BE'RBERIS.—Sepals and petals six. Berry two to three-seeded.

B. *vulgáris.*—Flowers in pendulous clusters, yellow. Leaves oval, with awned serratures. Spines three-fold.

Hedges, Primrose Hill; rare. Bromley, Kent. Near Dorking, in a hedge left side of the Guildford Road.

Order XCVI.—ROSA'CEÆ.

Calyx monosepalous, divided. Corolla polypetalous (sometimes none). Stamens growing from the calyx, not under the ovary, as in *Ranunculáceæ*. Ovary simple or numerous, with one style and one cell to each. Fruit an apple, or a collection of carpels, or follicles, enclosed by the persisting calyx. Leaves alternate, stipulate.

SUB-ORDERS.

1. AMYGDALI'NEÆ.

Fruit drupaceous, superior, solitary, *i. e.* not an agglomeration of carpels, as in strawberry; or follicles, as in *Spiræ'a.*

PRU'NUS.—Nut nearly smooth, sutures prominent. Stamens on a rim, surrounding the cup of the receptacle.

P. *pádus.*—Leaves oboval, pointed. Petioles with two glands. Flowers in long drooping racemes.

In a wood near Highgate, and at Lexden, Essex. Hedges about Shere, Surrey. The variety, with upright racemes, is found in this locality, in a hedge south of Gumshall.

P. *cérasus.*—Flowers umbellate, nearly sessile. Leaves lanceolate, serrated.

Plentiful in the hedges of Hertfordshire, Kent, and Surrey.

P. *doméstica.*—Flowers almost single. Segments of calyx spreading. Leaves oval, serrated, smooth.

Hedges in Kent; not uncommon.

P. *spinósa.*—Peduncles solitary. Segments of calyx resupinate, serrate. Leaves elliptic, lanceolate.

P. *insititia.*—Peduncles in pairs, shortish. Leaves ob-oval, somewhat spatulate, slightly hairy below.

Hedges between Primrose Hill and Bellesize House.

2. PYRINE'Æ (Poma'ceæ).

Styles and ovaries one to five. Fruit an apple. Ovary inferior.

PY'RUS.—Apple two to five-celled. Cells one to two-seeded, lined with a cartilaginous endosperm.

P. *commúnis.*—Peduncles longish. Flowers corymbous. Leaves serrated, elliptic.

Woods and hedges. Near the path across the meadows from Childs-hill to Hendon. Albury Park, by the Heath.

P. *málus.*—Flowers in sessile umbels. Leaves oval.

Woods and hedges; not rare.

P. *torminális.*—Leaves oval, or cordate, lobed, and serrated; lower lobes spreading. Peduncles corymbous. Flowers large, white. Fruit small.

Epping Forest, near Chingford—Mr. William Pamplin.

P. *aucupária.*—Flowers corymbous. Leaves pinnate; leaflets serrated. Fruit small, ornamental.

P. *ária.*—Leaves simple, oval, cleft, serrated, very downy below. Corymbs of flowers and fruit downy.

Not rare on the chalky hills of Kent and Surrey. Hedge by the road between Hendon and Finchley. Rare in Middlesex.

P. "*pinnatífida.*—Similar to P. *ária.* Leaves sometimes pinnatifid or pinnated.

"Darent Wood, Dartford—Rev. Professor Henslow." Hooker's Flora.

CRATÆ'GUS.—Fruit two to five nucules, in a round, fleshy substance. Nuts two-seeded, in a bony testa (shell).

C. *oxyacántha.*—Flowers in umbels. Leaves obtuse, usually three-cleft, serrated, smooth.

ME'SPILUS.—Calyx five-parted; in *Cratæ'gus* five-toothed. Upper ends of the bony cells not covered by the turbinate fruit.

M. *germánica.*—"Styles five. Flowers solitary, almost sessile. Leaves lanceolate."

Red-hill, Surrey. Hedge between Reigate and Nutfield—J. S. Mill, Esq. Both localities from Hooker's Flora.

3. ROSI'NEÆ.

Calyx urceolate (swelling), fleshy, inclosing many small carpels enveloped with hairs. Calyx five-cleft. Leaves pinnate.

RO'SA.—The only genus. Character same as sub-order.

* Fruit globular.

R. *spinosíssima.*—Fruit black, large. Leaflets seven to nine. Spines numerous, straight, equal.

• Wandsworth and Barnes Commons. On chalky soil, not rare.

R. *arvénsis.*—Fruit smooth, dark red. Peduncles unarmed. Branches long, reddish, with hooked prickles.

* * Fruit ovate.

R. *tomentósa.*—Fruit slightly armed, pale red. Peduncles hispid. Leaflets oval, hoary on both sides.

R. *rubiginósa.*—Fruit and peduncles hispid and glandular. Leaflets with rusty glands below.

Var.? *micrántha.*—Fruit ovate, on sub-hispid peduncles. Leaflets not so glandular below, and smell not so strong as in *rubiginósa.*

Hedges, Mitcham, &c.

R. *canína.*—Fruit and peduncles unarmed. Leaves oval, acuminate, glabrous, simply serrated, with upright teeth. Prickles on petioles very small.

Var. β. Leaves glaucous, large, not shining. Flowers larger and handsomer.

Var. *sarmentácea?* Leaves larger than in *canína*, doubly serrated, with upright teeth. Prickles on the petioles stronger; those on the shoots long, compressed, and falcate.

Var. *surculósa?* Lobes of the calyx entire. Styles more protrusive above the disk than in *canína.* Shoots tawny, with very strong prickles. Flowers more numerous.

Var. *sy'styla?* Leaves in fives, more elliptic than in the last three varieties, simply serrated, dark green above, lighter below, with downy ribs. Petioles glandular, not hairy. Stigmas hairy. Styles collected into a column like *arvénsis.*

Var. *bóreri?* Leaves smaller than in *surculósa*, and as in that variety, doubly serrated, much more rigid, hairy at the margin and midrib. Peduncles furnished with weak setaceous hairs. Segments of the calyx spreading. Stigmas sessile on the disk, not hairy.

Var. *dumetórum?* Flowers smaller than in any of the above varieties, almost red. Peduncles twice as long as the bracts. Leaves flat, elliptic, simply serrated. Prickles small. Neither hairy nor glandulous.

Var. *forstéri.* Petioles tomentose. Prickles on the shoots red, conical, and hooked. Peduncles slightly hairy, not longer than the bracts. Stigmas sessile, not protruding.

The genus *Rósa* contains 150 species; of these there are several thousand varieties.

4. SPIRI'NEÆ (SPIRÆEÆ).

Fruit of few-seeded follicles, superior.

SPIRÆ'A.—Calyx five-cleft. "Styles two to five. Fruit capsular, keeled, two-valved, with a few seeds in each."

S. *ulmária.*—Leaves interruptedly pinnate, downy below. Flowers in broad cymes.

S. *filipéndula.*—Styles indefinite. Flowers white, cymous. Leaves interruptedly pinnate. Roots tuberous.

Meadows about Leatherhead. Croydon, on Wood cot, Sanderstead, and Purley Downs; common.

S. *salicifólia.*—A shrub with entire, oval, or lanceolate, obtuse, serrated leaves. Florescence in terminal racemes.

Common in shrubberies.

5. POTENTILLI'NEÆ.

Fruit a conglomerated mass of carpels, or acini (small fleshy drupes) on a rather erect receptacle. Styles indefinite.

GE'UM.—Calyx ten-cleft, alternate segments smaller. Carpels awned.

G. *urbánum.*—Flowers erect. Awns hooked. Leaves lyrate, pinnatifid. Stipules roundish.

Hedges, common.

G. *rivalé.*—Flowers pendulous. Awns feathery, twisted. Stipules oval, acuminate.

Chee Torr, Derbyshire; and in several other parts of this county. Not uncommon in gardens.

FRAGA'RIA.—Calyx as *Géum.* Pericarps on a pulpy receptacle.

F. *vesca*—Leaves ternate. Stems repent (creeping).

F. *elátior?*—Stem erect. Flowers umbellate.

POTENTI'LLA.—Calyx like *Fragária.* Pericarps on a dry receptacle.

P. *anserína.*—Leaves pinnate, deeply serrated, silky below. Peduncles one-flowered.

P. *réptans.*—Leaves quinate, oboval, serrated. Stem repent, filiform. Peduncles one-flowered, longer than the leaves. Flowers yellow.

P. *fragária.*—Leaves ternate, with hairy serrated leaflets. Stems prostrate. Flowers white.

P. *argéntea.*—Leaves quinate, incised, tomentose below. Stem erect, white. Flowers yellow.

Gravelly places. Not very rare.

126 known species belong to this genus.

TORMENTI'LLA.—Calyx eight-cleft, alternate segments smaller. Four petals. Pericarps as *Potentilla.*

T. *officinális.*—Leaves ternate, sessile. Leaflets lanceolate, cleft, and serrated. Stem forked.

T. *réptans.*—Stem very long, prostrate, simple. Leaves petiolated. Flowers larger than those of T. *officinális.*

Bromley Common, Kent, where the path branches off the London road to Hayes.

AGRIMO'NIA.—Calyx five-cleft, bristly. Stamens from eight to twenty. Fruit two indehiscent capsules, invested by the indurated calyx.

A. *eupatória.*—Florescence usually in a simple spike. Leaves interruptedly pinnate. Leaflets incised, or deeply serrated.

Borders of fields, &c.

CO'MARUM.—Calyx ten-cleft. Pericarps smooth, on a persisting, ovate, spungy, hairy receptacle.

C. *palústre.*—Flowers dark purple. Leaves quinate, pinnate. Boggy places. Peat bogs.

RU'BUS.—Fruit many juicy drupes (*acini,*) on a dry, conical receptacle.

Section 1.—Fruticósæ.

Prickles on the angles. Stems dark-brown, usually covered with bloom, without glands or setæ.

R. *fruticósus.*—Stem very strong, slightly downy. Prickles very broad at the base, mostly deflexed. Leaves large, broadly oboval, with short, indistinct, reflected points, smooth and shining above, usually white below. Panicle much branched, spreading and leafy, slightly hairy.

Var. Prickles not so much dilated at the base. Leaves smaller. Panicle long, dense, not so much spread nor leafy as the last.

Var. *nitidus?* Much smaller than the above. Stem with flat sides, and fewer prickles, which are not so large and broad at the base, but strong, and much hooked. Leaflets disposed as *fruticósus*, viz., the lower pair on branches from the intermediate pair, larger, thinner, not bending at the points. Whole plant without down, except a very little about the panicle.

Var. *discolor*? Stem with depressed or hollow sides, covered with bloom, and fine silky pubescence. Lower leaflets in threes and fives, green on both sides, pliant, elliptic, each on a distinct foot-stalk. Upper and younger leaves dark, chocolate-coloured on both sides, but chiefly below. Panicle lax and leafy.

Var. *carpinifólius*? Stem bluntly angled, with flat or slightly depressed sides. Prickles not numerous, nor large, wide at the base. Leaves in fives, narrow, oblong, pointed, widely serrated; upper, hoary or whitish below. Panicle nearly simple, lax at the base.

Var. *flagelláris*? Stem short, erect, roundish, smaller than any of the above varieties, and less prickly, branchy at the top, and leafy. Leaves in threes and fives, small, roundish, hairy on both sides. Runners or branches filiform, about as thick as whip-cord, with few prickles, with ternate, very pliant, large, flat, coarsely serrated, or crenated leaflets, not pointed, beautifully downy, or white below, and bright green above.

Var. *plicátus*? About as large, and of the same habit as the variety of *fruticósus*. Leaflets separately stalked, large, crisp or plaited at the margin. Panicle more spreading, less downy and prickly than that variety. Calyx quite unarmed.

Var. *macrophy'llus*? Stem smooth and shining, or dull and hairy, with flat sides, prickles small, uniform, few. Leaves on long petioles, with lanceolate stipules. Leaflets three or five, oval, elliptic, acuminate, very long, all on distinct footstalks, hairy below. Panicle corymbous, slightly hairy. Calyces hairy and downy, with long acuminate segments, slightly prickly at the base. Flowers very large, pure white. Petals elliptic.

Var. Stem slightly glandular. Leaves smaller, more sharply serrated, very neat, oboval, acuminate, notched at the base. Panicles more dense, more prickly and glandular. Petals oblong, pink.

Var. *vulgáris*? Stem with bloom, acute angled, striated, not depressed. Leaves in fives, central cordate, or broadly oval, acuminate; lateral and lower pairs oval, elliptic; lowermost almost sitting; shining and wrinkled above, softly pubescent, and hoary below. Panicle small, nearly simple

Section 2.—Villo'sæ.

Stem more or less hairy, slightly glandular. Prickles chiefly on the angles, and mostly uniform.

R. *affi'nis?*—Stem more or less hairy, acute-angled, depressed and striated. Prickles angular, uniform, general and partial petioles short and downy, the latter all distinct. Leaflets five, oboval, acuminate, notched at the base, pubescent above, with dense, soft pubescence below. Panicle hairy, almost simple. Agrees in habit with *nitidus*. Varies much in the pubescence and armature of the stem, and also in the consistence of the leaves, these being sometimes very soft and pliant, sometimes rigid, like some of the following tribes.

Var. *diversifólius*? Stem not so acutely angled as *affi'nis*, more prickly, very densely pubescent. Prickles on the petioles more numerous, and more hooked. Leaves in threes and fives, oval-pointed, hoary, whitish below. Panicle, more shaggy.

Var. *leucostáchys*? Stem roundish, or with blunt angles, very shaggy and glandular towards the top. Leaves on long petioles in fives. Leaflets roundish, or oval, shortly acuminated, all notched at the base, on long partial stalks, smooth, leathery, wrinkled and crisp above. Panicle compound, very open, and axillary at the base, shaggy. Calyx prickly and glandular.

Var. *schleuchéri*? Stem angular, not so shaggy as *leucostáchys*, with longer, slenderer, more deflexed, and strongly hooked prickles. (*Leucostáchys* horizontal.) Central leaflet cordate. Panicle armed with long deflexed setæ-like prickles. Calyx more prickly and setaceous than the former.

Var. *cordifólius*? Stem usually smooth, strong, upright, or arched. Prickles chiefly angular, with some in the hollows of the stem. Leaves in fives, on long petioles. Central leaflet on a very long partial stalk, cordate, acuminate, lateral pairs oval or oboval, hoary below. Panicle spreading, compound, with all the branches axillary, except the very uppermost. Calyx slightly armed, downy, not glandular.

Var. *rhamnifólius*? Stem similar to *cordifólius*. Prickles more unequal, less confined to the angles. Leaflets roundish, oboval, pubescent above, hoary below. Panicle similar to *cordifólius*. Stipules broader and lunulate.

A variety with a flat-sided, angular, hairy stem, and a roundish, ob-elliptical, central leaflet. Central pair oboval; lowest oval, all green below.

Var. *sprengélii?* Stem bluntly angled, sulcate and striated, thickly clothed with short hairs, intermixed with a very few glands. Prickles on the stem very few, small, and recurved. Leaves ternate, hairy above, downy below, oval, sharply serrated. Panicle simple. Flowers white. Differs from *affi'nis* in the oval, ternate, smaller leaves, hairier stem, and less downy or hairy panicle.

Section 3.—Glandulo'sæ.

Stems rough, with setæ, mostly hairy, more or less glandular. Habit usually prostrate. Prickles unequal, and scattered over the stem.

R. *koehléri.*—Stem strong, obtuse angled, striated and depressed, recumbent, strongly branched, covered with setæ, glands and unequal prickles. Leaves in fives; central roundish, oval or oboval; lateral oval, all acuminate and notched at the base.

Var. *fúsco-áter?*—Stem more depressed than *koehléri*, prickles not so much recurved. Leaves in threes, roundish, oval, shining above, pointed.

Var. *rúdis.*—Stem acutely angled, furrowed, more prickly than either of the two above. Prickles conical, chiefly recurved, passing into setæ. Leaves fives, central, oboval, elliptic; lateral elliptic, narrow; all acuminate or cuspidate, smooth, shining, slightly wrinkled above.

Section 4.—Coryli‍fo'liæ.

Stems roundish. Prickles unequal, variously disposed. Lower leaflets almost, or quite, sessile.

R. *férox.*—Stem tapering, scarcely angular, striated, purple coloured. Prickles unequal, very numerous, strong, with very tumid bases, with a few glands and setæ, which subsequently become small prickles. Leaves in threes or fives, the lowest pair, or both pairs, almost sessile, oval and pliant; central cordate, pointed, all large, wrinkled above, and softly pubescent below. Panicle corymbous, widely spreading; lower branches long and axillary, strongly armed, downy, setaceous and glandular.

Var. *dumetórum?*—Stem more angled than *férox*, with smaller prickles. Runners shining, tapering, bearing numerous erect filiform flowering shoots. Calyx unarmed.

Var. *corylifólius?*—Stem roundish below, bluntly angled above, tapering, greenish. Prickles nearly uniform. Leaves in fives; central oboval or obcuneate; lateral similar; lower sessile, all pliant and sharply serrated, slightly pubescent on both sides. Panicle close, corymbous, prickly and downy.

Var. 1.—Stem round and tapering with semi-erect branches. Central leaflet large, broadly cordate, on a very long stalk; lower pair rhomboid, on short stalks; lowest elliptic, not quite sessile. Panicle lax, on long, very prickly, few-flowered branches, glandular, slightly downy, not hairy.

Var. 2.—Stem glaucous, less angular, more prickly. Leaves

Var. *agréstis*?—Stem with blunt angles, flat sides, and a few small straight prickles. Leaves in fives; upper broadly cordate, roundish; lateral oval; lowest nearly sessile, distinct; all flat and smooth above, crisp at the margin, hoary and downy below. Panicle very divergent, with corymbous branches, without hair or down, slightly glandular. Calyx segments large, upright after flowering. Petals large, white.

R. *cæ'sius*.—Stem prostrate, round, glaucous, prickly; prickles very unequal. Leaves ternate; central cordate; lateral pair sessile; all wrinkled, and dark green above, pubescent or hoary below. Flowers corymbous. Petals white.

R. *idæ'us*.—Leaves in fives or threes, pinnated. Stem erect, with small unequal prickles.

In hedges, about gardens, and occasionally on walls. Woods in Cambridgeshire, &c. Blackheath, Albury, not rare.

The species and varieties of *Rúbus* here described, were collected about Hampstead, Primrose Hill, the reservoir on Barrow Hill, by the Regent's Park, and in the hedges about the fields between Kentish Town and Hampstead Heath. In no other locality has the author observed so many different forms of this variable tribe of plants. It is probable that one of each section may be a genuine species. After a careful examination of several hundreds, the editor ventured to arrange them after the example of Dr. Lindley, applying his names, when possible, or those of Smith, Hooker, and Sprengel. It was, however, on reflection, deemed safer and more expedient to consider all in each section, merely as varieties of some one of the forms, chiefly on account of the similarity of the fruit, and because the varieties are so blended, that sixty or even eighty might easily be collected in the said district. It is not certain that the species, *fruticósus*, *affi'nis*, *kóehleri*, and *férox*, as applied here, are the very species which Lindley, Sprengel, and other authors have described under these names; nor that the varieties, if varieties they be, are the identical species or varieties of the authors, whose names they bear. The plant was, in every case, compared with the descriptions of these excellent botanists, and the name of the species given to which it bore the greatest resemblance. The description was, in like manner, drawn up from the plant, without respect to the descriptions of authors. In the third and fourth sections, double or triple the number of varieties might easily have been separated. If these varieties of *Rúbus*, and the varieties of *Rósa*, be reckoned species, the family of *Rosáceæ* would have a greater numerical proportion to the rest of the Phænogamous species, than the largest families, even than the grasses, or the compound plants, which, in all Europæan Floras, are more numerous than the *Rosáceous* species.

There are reckoned, by Sprengel, 116 species.

5. SANGUISORBI'NEÆ.

Carpel inclosed in the calyx Stamens usually definite.

ALCHEMILLA.—Perianth single, eight-cleft. Segments alternately smaller. Stamens one to five. Pericarp one.

A. *vulgáris.*—Leaves entire, plaited, five-lobed.

Meadows, not common. Near Rockingham Forest. Near Tring, Herts—Mr. William Pamplin.

Banks of the Mole, Dorking—Mr. Cameron, in Luxford's Reigate Flora.

A. *arvénsis.*—Leaves trifid, lobes deeply cut, pubescent. Flowers axillary, sessile.

Corn fields, common.

POTE'RIUM.—Monœcious. Calyx four sepals. Corolla four-parted. Two pericarps.

P. *sanguisórba.*—Stamens very long, numerous, in two or three parcels, red. Leaves pinnate. Stem angular.

Chalky pastures.

SANGUISO'RBA.—Perianth single, four-lobed, coloured, bracteate. Pericarps two, surrounded by the persisting base of the perianth.

S. *officinális.*—Leaves pinnate. Florets capitate. Capitules ovate. Stamens as long as the perianth.

Chalky pastures, not rare.

SECTION B.

Corolla polypetalous. Ovary inferior.

Order XCVII.—UMBELLI'FERÆ.

Calyx minute, toothed. Petals five. Stamens inserted on the ovary. Fruit two achenia attached to a central filament. Florescence usually in compound umbels.

* Leaves entire.

HYDROCO'TYLE.—Umbel simple, sessile close to the root.

H. *vulgáris.*—Leaves spreading, peltate, crenated.

Marshy places, not uncommon.

SANI'CULA.—Umbels capitate. Fruit armed with hooked bristles.

S. *europǽa.*—Leaves on longish petioles, smooth, rigid, lobed.

Woods, common.

ERY'NGIUM.—Flowers capitate, on a scaly receptacle. Fruit covered with bristles or scales.

E. *marítimum.*—Root leaves petiolate, roundish, spinous. Upper leaves amplexicaule, palmated, rigid.

Sea shores. Mersea Island, &c.

BUPLEU'RUM.—Bracts of the umbels large, five-leaved. Fruit roundish, compressed.

B. *rotundifólium.*—Leaves oval, perfoliate. Flowers yellow.

Chalky corn fields.

** Leaves pinnate.

HERA'CLEUM.—Fruit elliptic, compressed, dilated at the margin.

H. *sphondy'lium.*—Leaflets pinnatifid, cleft, serrated.

Var. *angustifólium* (Flor. Brit.), narrow leaved.

SI'UM.—Fruit nearly ovate, compressed and striated, glabrous. Bracts of the umbel many.

S. *latifólium.*—Leaves pinnate, broad. Leaflets equally serrated.

Rivers and ditches.

S. *angustifólium.*—Leaves narrow. Leaflets unequally serrated.

Ditches, not rare. A slender, rather tall, erect plant.

S. *nodiflórum.*—Stem procumbent. Umbels opposite the leaves and sessile. No involucre (no bracts).

S. *répens.*—Stem creeping. Umbels pedunculate. Terminal leaflet three-cleft. Smaller plant than *nodiflórum.*

Not rare in wet boggy places.

S. *inundátum.*—Leaflets under water, capillary; above, pinnatifid, three-cleft, wedge-shaped. Umbels sessile, of five florets.

In dried-up ponds, &c.

CA'RUM.—Petals obcordate. Fruit oblong, with five filiform ridges.

C. *cárui.*—Stem upright, branchy. No involucel. Involucre mostly deficient. Leaves doubly pinnate, with linear segments. Flowers dense.

Well known for its highly aromatic fruit.

Essex, between Wivenhoe and Colchester, rare.

SI'SON.—Fruit ovate. Umbels with about four bracts.

S. *amómum.*—Umbels few-flowered. Lower leaflets oval, cleft, serrated; upper ditto often pinnatifid.

S. *ségetum.*—Leaves pinnatifid. Leaflets oval, pointed, incised. Lower leaflets turned inwards, facing each other. Bracts setaceous. Florets few. Petals incurved. Very branching plant, of a deep green colour.

Fields beyond Duppa's Hill, Croydon; Chingford, Essex, and Battersea—Mr. William Pamplin.

PIMPINE'LLA.—Fruit ovate, long, striated. Petals inflexed. Umbels without bracts.

P. *mágna.*—Leaflets oval. Terminal one three-lobed.

P. *saxífraga.*—Lower leaflets roundish; upper linear.

Pastures. These two abound on chalky Downs.

PASTINA'CA.—Fruit oval, flattish, striated. Florets minute, yellow, with inflexed segments.

P. *satíva.*—Leaflets serrated, pubescent. Plant strong, rigid, upright.

Borders of chalky fields, common.

ANE'THUM.—Fruit somewhat compressed, three-ribbed.

A. *fœnículum.*—Leaflets setaceous, numerous, deep green. Flowers yellow.

Near Erith, on a dry sandy waste place. Between Dorking and Westgate.

* * * Leaves twice or thrice pinnate.

TORI'LIS.—Fruit crowned with a pearly disk, without ribs, covered with hard brittle granulations.

T. *anthrísca.*—Involucre consisting of many subulate bracts.

Under hedges, common.

T. *infésta.*—Involucre none. Involucel of few leaflets. Flowers white. Stem erect, glabrous.

Cornfields.

T. *nodósa.*—Stem prostrate. Umbels lateral. Fruit granulated.

Gravelly and stony places.

DA'UCUS.—Fruit prickly. Bracts pinnatifid.

D. *caróta.*—Leaves thrice, pinnated. Umbel large, compact and concave.

Bank of a pond below Bellesize House, where the path passes from Primrose Hill to the New Finchley road.

BU'NIUM.—Fruit ovate. Root tuberous.

B. *flexuósum.*—Stem slender, leafless at the base. Leaves thrice-pinnated. Segments linear, cleft, and pinnatifid.

CNI'DIUM.—Fruit surrounded with winged ridges. Bracts very short.

C. *siláus.*—Leaves variously divided. Bracts of the umbel two; of the umbellucel many. Flowers yellow.

Pastures and meadows.

ANGE'LICA.—Fruit roundish, with three wings on each side.

A. *sylvéstris.*—Leaves twice-pinnated. Leaflets oval, sharply serrated.

Woods.

A. *archangélica.*—Taller than the preceding. Terminal leaflets lobed.

Thames, below Greenwich; near Dorking—Mr. J. S. Mill.—Hooker's Flora.

Lingfield Park, Sussex.

This species may be distinguished from *sylvéstris* by the upper leaf being trifid, not ternate, and by having an additional pair of ternate leaves on the common petiole of the compound leaf. The peduncles are hairy, and the involucre and involucel are smaller.*

ŒNA'NTHE.—Fruit crowned with the calyx and styles.

Œ. *fistulósa.*—Radical leaves twice pinnated. Leaflets plain. Leaves of the stem alternate, pinnate, hollow, cylindric.

Œ. *phellándrium.*—Leaves thrice pinnated. Umbels opposite, without bracts (involucre). Bracts of the umbellucels many, setaceous.

Œ. *crocáta.*—Leaflets cuneate, incised, nearly equal. A strong, tall, and bushy plant. Very noxious.

Thames, between Kew and Putney, &c.

Common about Albury, and all along the vale between Dorking and Guildford.

Œ. *pimpinelloídes.*—Root leaflets cuneate, incised. Cauline linear, long, entire. Umbel many-rayed, with a polyphyllous involucre.

Salt marshes, Essex.

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* I doubt whether these characteristics be general or permanent.

Œ. *peucedanifólia.*—All the leaflets linear. Umbel without any involucre.

Bogs near Wansford, Northamptonshire.

ÆTHU'SA.—Fruit deeply striated. Petals inversely cordate. Bracts semiradiate.

Æ. *cynápium.*—Leaves bipinnate, smooth. Umbels terminal, on long peduncles, opposite the leaves.

SCA'NDIX.—Fruit awl-shaped, ribbed, crowned with the enlarged receptacle of the floret, and terminated by a very long beak.

S. *pécten véneris.*—Segments of the leaflets linear.

CHÆROPHY'LLUM.—Fruit linear, oblong, glabrous. Bracts of involucel concave, reflexed. No involucre.

Ch. *sylvéstre.*—Stem glabrous, tall and upright. The earliest in flower, and the most common of the umbellate tribe.

Ch. *temuléntum* (*Myrrhis temulenta*, Sm.)—Stem rough.

Ch. *satívum.*—Leaves tripinnate, nearly smooth, incised, on hollow, roundish, furrowed leaf-stalks, tender and aromatic. Cultivated for the leaves, which are used in soups and salads.

Lane at Gumshall, Shere. Outcast of a garden.

ANTHRI'SCUS.—Petals obcordate. Fruit taper, the beak with five ridges. Seed deeply furrowed. Involucre of five to seven leaflets.

A. *vulgáris.*—Leaves tripinnate, and pinnatifid, hairy. Florets small.

CO'NIUM.—Fruit gibbous, ribbed, and sulcate. Petals cordate.

C. *maculátum.*—Stem very tall, branchy, smooth, spotted.

Hedges on the east side of Haverstock Hill. Common in Essex, about Purfleet, &c. Hedges about Shere and Albury, common.

* * * * Leaves ternate, twice ternate, or thrice ternate.

SMY'RNIUM.—Fruit reniform, angled. Several florets abortive.

S. *olusátrum.*—Leaves thrice ternate. Leaflets oval, serrated, or incised. Upright, robust, smooth plant.

Mersea Island; Battersea; Hampton Court, under the wall by the side of the river, Mr. Wm. Pamplin--Thomas Ralph, Esq. Rochester Castle and the Reculvers—Mr. Pamplin. Brighton road, Shot Hill, Reigate, as stated in Luxford's Flora.

CICU'TA.—Fruit nearly globular, smoothish, striated, crowned with the persisting calyx, and the long reflex styles. Flowers numerous.

C. *virósa.*—Leaves sub-biternate. Leaflets elliptic, lanceolate, deeply and sharply serrated.

Loch of Forfar—Wm. Christy, Esq.—from Mr. Wm. Pamplin.

A'PIUM.—Fruit ribbed, with five ridges. Petals inflexed, roundish. Involucre and involucel wanting.

A. *graveólens.*—Stem sulcate, (furrowed). Cauline leaflets cuneate, light green, shining.

Thames, below Greenwich.

ÆGOPO'DIUM.—Fruit ovate, oblong, ribbed.

Æ. *podagrária.*—Root leaves twice ternate. Stem leaves ternate. Leaflets oval, serrated. Stem hollow.

Order XCVIII.—ARALIA'CEÆ.

Distinguished from *Umbellíferæ*, by their ovary having more than two cells, and their usually shrubby habit.

HE'DERA.—Petals five, broad at the base. Fruit a five-seeded berry, covered by the calyx.

H. *hélix.*—Flowers green, umbellate. Leaves oval or lobed.

ADO'XA.—Perianth single, four to five cleft. Fruit baccate, four to five celled.

A. *moschatéllina.*—Florescence umbellate, of four verticilled flowers and one terminal. Stamens eight, united in pairs, and rising from a fleshy disk (ring) surrounding the ovary. Leaves radical, tri-ternate, petioled. Stem about a span high.

Shady lanes, and under hedges about Albury and Shere. About Croydon, in similar situations. In a copse or shaw near the Rev. S. Palmer's, Chigwell.

Order LXXIX.—SAXIFRAGINA'CEÆ.

Sepals five. Petals five. Fruit capsular, two-celled, many-seeded. Ovary sometimes half superior, sometimes free.

SAXI'FRAGA.—Stamens ten, half opposite the petals, half alternate. Fruit capsular, opening between two beaks.

S. *granuláta.*—Root leaves reniform, on long petioles, lobed. Upper leaves almost sessile. Root granulated.

S. *tridactyly'tes.*—Root leaves trifid; upper entire, three to six inches high, hairy, reddish.

CHRYSOPLE'NIUM.—Perianth single, four to five cleft. Capsule two-beaked, one-celled.

Ch. *oppositifólium.*—Leaves opposite, cordate, roundish.

Great Bog, Bishop's Wood, Hampstead. Bromley, Kent. Shere and Albury, in boggy shaded places.

Ch. *alternifólium.*—Root leaves roundish; upper broadly cordate, all petiolate. Stem angular, branching at the top.

Larger species than *oppositifólium*, from which it is very distinct in appearance.

Boggy shaw, between Wonham Mill and Buckland, near Reigate.

Order XCIX.—GROSSULA'CEÆ.

Calyx five-cleft. Petals five. Fruit a one-celled, many-seeded berry.

RI'BES.—Calyx urceolate. Stamens five. Style two-cleft.

R. *grossulária.*—Branches prickly. Leaves rounded and lobed. Pedicels bearing one-flower, and two minute bracts.

Hedges about Albury and Shere, Surrey. High Laver, Ongar, and other parts of Essex.

R. *rúbrum.*—Branches unarmed. Flowers and fruit racemous, pendulous. Bracts very short. Leaves five-lobed. Stem and branches without prickles.

Albury Park; rare.

Order C.—ONAGRA'CEÆ.

Calyx four or five-cleft. Petals four or five. Stamens double the number of the petals. Ovaries four or five-celled. Many-seeded.

ŒNOTHE'RA.—Calyx four-parted, with reflexed more or less coherent segments. Petals four. Capsule four-valved.

Œ. *biénnis*.—Stem roughish, with sessile, sub-spicate flowers.

Bog at the foot of Addington Hills, near Shirley; Weybridge Heath, by the Railway; fields at Hendon, naturalized; common in gardens.

EPILO'BIUM.—Calyx four-parted. Petals four. Stamens eight. Capsule long, four-angled. Seeds with long hairs.

E. *angustifólium*.—Flowers large, handsome. Petals unequal. Leaves linear, lanceolate. Stem virgate, red. Whole plant smooth.

On Boxhill, abundant. Buckland, and near Betchworth, on banks, walls, &c. Weston Wood, Albury.

A variety with white flowers. This rare plant is in the gardens of Albury Park.

E. *hirsútum*.—Leaves hairy. Stem branchy, hairy. Root creeping.

A very shaggy variety of E. *hirsútum* grows in a wood near Ranmer Common, and on Albury Church.

E. *parviflórum*.—Leaves sessile, lanceolate. Stem almost simple, downy.

E. *palústre*.—Leaves nearly glabrous. Stem ditto. Stigma undivided.

E. *tetragónum*.—Stem four-angled.

Differs from *palústre* in the winged or four-angled stem, produced by the decurrency of the toothed lanceolate leaves, which are somewhat heart-shaped at the base. In *palústre* the leaves are elliptic, lanceolate, scarcely toothed. Both plants are smooth.

A proliferous variety of either *tetragónum* or *palústre* on the roadside, half-way between Clandon and Ockham, Surrey.

E. *montánum*.—Leaves oval, acute, petioled, toothed. Stem round.

E. *roséum*.—Stem almost four-angled, smooth. Leaves mostly opposite, petiolated, oval, toothed, quite smooth. Florets small, pale, striated. Stigma entire.

Near Albury Church, by the river. In gardens and waste ground about Shere, not uncommon.

ISNA'RDIA.—Calyx four-cleft. Petals four or none. Capsule obovate, four-angled, four-valved, four-celled, many-seeded, crowned with the calyx.

I. *palústris*.—Stem procumbent, rooting, glabrous. Leaves opposite, oval, acute, stalked. Flowers axillary, solitary, sessile, apetalous.

Abundant in a bog on Petersfield Heath, Hants—Discovered by Miss Rickman and John Barton, Esq.

1. HALLORAGI'NEÆ.

Perianth, (if any) single. Stamens on the calyx. Ovary one or few-celled. Ovule solitary.

HIPPU'RIS.—No perianth, except a minute rim to the ovary, which is one-celled and one-seeded. Flowers monandrous and monogynous.

H. *vulgáris*.—Stalk upright. Leaves linear, whorled.

Ponds.

Blatherwycke Park, Northamptonshire. Fens, Huntingdon and Cambridge. Alresford, Hants—Mr. Wm. Pamplin.

Mill pond, near Leatherhead—J. Freeman, Esq.

MYRIOPHY'LLUM.—Monœcious. Perianth in four pieces. Stamens eight. Stigmas four. Pericarp four-celled.

M. *spicátum*.—Barren flowers spicate.

M. *verticillátum*.—Slender, reddish, with verticilled flowers.

Woolmer Forest, Hants; Tilgate Forest, Sussex.

CA'LLITRICHE.—Monœcious. Perianth deficient. One stamen, two styles. Pericarp four-celled.

C. *vérna and autúmnalis*.—Slender aquatics, mostly under water. Upper leaves floating.

Several varieties are distinguished by the form of their leaves which are spatulate, and linear, with various modifications of these forms.

2. CIRCI'NEÆ.

Sepals two. Petals two. Stamens two. Ovary two-celled.

CIRCÆ'A.—Fruit capsular; cells one-seeded, hairy, pedunculate.

C. *lutetiána*.—Stem erect. Leaves petioled, oval, or cordate, toothed.

Woods and hedges, Shere, &c.

On the north side of Golder's Hill, Hampstead, banks and ditches of the Hendon road.

TABLE
OF THE
ORDERS AND GENERA IN THE LONDON FLORA, THE HAMPSTEAD FLORA, (MS. INEDITA), AND IN THE BRITISH FLORA.

NOTE.—*The 1st column of Nos. gives the amount of Hampstead species; 2d, species in the London district; 3d, British species; 4th, Known species.*

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Lond. Sp.	Brit. Sp.
FILICES	Polypodium	- -	- -	3	4
	Aspidium	- -	- -	9	17
	Asplenium & Cistopteris	- -	- -	6	10
	Scolopendrium	- -	- -	1	1
	Blechnum	- -	- -	1	1
	Pteris	- -	- -	2	2
		Osmunda	- -	1	1
	Equisetum	- -	- -	5	8
		Ophioglossum	- -	1	1
	Lycopodium	- -	- -	2	6
		Botrychium	- -	1	1
			Grammitis	..	1
			Woodsia	..	2
			Adiantum	..	1
			Trichomanes	..	1
		Hymenophyllum	- -	..	2
		Pilularia	- -	1	1
			Isoetes	..	1
CHARACEÆ,	Chara	- -	- -	4	6
FLUVIALES	Potamogeton	- -	- -	15	17
(NAYASACEÆ)	Zannichellia	- -	- -	1	1
		Zostera	- -	1	1
		Ruppia	- -	1	1
PISTIACEÆ	Lemna	- -	- -	4	4
TYPHACEÆ,	Typha	- -	- -	2	3
with Arum.	Sparganium	- -	- -	3	3
	Acorus	- -	- -	1	1
	Arum	- -	- -	1	1
JUNCEÆ, with	Juncus	- -	- -	13	23
Triglochin and	Luzula	- -	- -	4	7
Scheuchzeria		Triglochin	- -	2	2
			Scheuchzeria	..	1
LILIACEÆ		Scilla	- -	2	4
	Allium	- -	- -	3	7
		Ornithogalum	- -	3	4
		Tulipa	- -	1	1
		Muscari	- -		

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Knw. Sp.
LILIACEÆ—(*continued.*)	- -	Asparagus	- -	..	1	1	3
			Gagea	..	..	1	1
	Hyacinthus	- -	- -	1	1	1	
			Anthericum	..	..	1	3
		Narthecium	- -	..	1	1	
	- -	Fritillaria	- -	..	1	1	3
	Convallaria & Polygonatum	- -	- -	1	2	4	1
	Smilacina	- -	- -	1	1	1	
	Ruscus	- -	- -	1	1	1	
		Paris	- -	..	1	1	
DIOSCORIACEÆ	Tamus	- -	- -	1	1	1	
BUTOMACEÆ	Butomus	- -	- -	1	1	1	
ALISMACEÆ	Alisma	- -	- -	2	2	3	
	Damasonium	- -	- -	1	1	1	
		Sagittaria	- -	..	1	1	1
IRIDACEÆ	Iris	- -	- -	1	2	2	94
			Trichonema	..	..	1	3
		Crocus	- -	..	3	4	1
AMARYLLACEÆ	Narcissus	- -	- -	1	3	3	9
	Galanthus	- -	- -	1	1	1	
		Leucojum	- -	..	1	1	
HYDROCHARIDACEÆ.	- -	Hydrocharis	- -	..	1	1	..
ORCHIDACEÆ	Orchis	- -	-	3	12	14	6
	Listera	- -	- -	1	2	3	
		Aceras	- -	..	1	1	
		Herminium	- -	..	1	1	1
		Ophrys	- -	..	5	5	1
		Neottia	- -	..	1	2	
		Epipactis	- -	..	3	6	7
			Goodyera	..	..	1	
			Malaxis	..	..	2	1
			Corallorrhiza	..	..	1	4
			Cypripedium	..	..	1	1
	Scirpus	- -	- -	2	5	7	12
	Eleocharis	- -	- -	2	4	5	2
	Isolepis	- -	- -	2	2	2	4
	Eriophorum	- -	- -	1	3	7	
CYPERACEÆ	- -	Cyperus	- -	..	2	2	30
		Schœnus	- -	..	1	1	6
		Rynchospora	- -	..	1	2	3
		Cladium	- -	..	1	1	14
	Carex	- -	- -	24	33	62	28
GRAMINEÆ	Agrostis	- -	- -	3	5	5	11
	Calamagrostis	- -	- -	1	2	4	4
	Millium	- -	- -	1	1	2	2
	Phleum	- -	- -	1	1	6	
	Alopecurus	- -	- -	3	5	6	22
	Anthoxanthum	- -	- -	1	1	1	
	Phalaris	- -	- -	2	2	2	2

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Knw. Sp.
Gramineæ—(*continued*).	Avena	- -	- -	1	5	6	40
	Holcus	- -	- -	2	2	2	5
	Arrhenatherum	- -	- -	1	1	1	2
	Melica	- -	- -	2	2	3	24
	Glyceria	- -	- -	2	6	6	6
	Poa	-	- -	5	5	9	148
	Triodia	- -	- -	1	1	1	10
	Briza	- -	- -	1	1	2	9
	Dactylis	- -	- -	1	1	1	20
	Festuca	- -	- -	8	11	14	74
	Bromus	- -	- -	4	10	10	66
	Arundo	- -	- -	1	1	1	9
	Hordeum	- -	- -	2	3	3	18
	Triticum	- -	- -	1	2	5	30
	Lolium	- -	- -	1	4	5	11
	Cynosurus	- -	- -	1	1	2	8
	Nardus	- -	- -	1	1	1	2
		Rottbollia	- -	..	1	1	2
		Digitaria	- -	..	1	1	29
		Panicum	- -	..	1	1	240
		Polypogon	- -	..	2	2	15
		Elymus	- -	..	3	3	25
		Knappia	- -	..	1	1	1
			Cynodon	..	..	1	10
		Spartina	- -	..	2	2	10
			Stipa	..	..	1	37
			Lagurus	..	..	1	1
			Hierochloe	..	..	1	7
			Sesleria	..	..	1	11
Coniferaceæ	Pinus	- -	- -	1	1	1	43
	Taxus	- -	- -	1	1	1	3
		Juniperus	- -	..	1	2	26
Amentaceæ	Quercus	- -	- -	2	2	2	110
Sub-O. Quercineæ	Castaneæ	- -	- -	1	1	1	4
	Fagus	- -	- -	1	1	1	2
	Corylus	- -	- -	1	1	1	7
Betulineæ	Carpinus	- -	- -	1	1	1	8
	Betulus	- -	- -	1	1	2	19
	Alnus	- -	- -	1	1	1	18
Salicineæ	Salix	- -	- -	..	..	64	176
	Populus	- -	- -	4	4	4	24
Myricineæ	- -	Myrica	- -	..	1	1	21
Ulmaceæ	Ulmus	- -	- -	5	5	7	13
Cheratophyllaceæ	Cheratophyllum	- -	- -	2	2	2	2
Urticaceæ	Urtica	- -	- -	3	3	3	114
	Parietaria	- -	- -	1	1	1	19
	Humulus	- -	- -	1	1	1	1
Euphorbiaceæ	Euphorbia	- -	- -	4	7	13	213
	Mercurialis	- -	- -	1	2	2	7
		Buxus	- -	..	1	1	5
Aristolochaceæ	- -	Aristolochia	- -	..	1	1	69

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kwn. Sp.
POLYGONACEÆ	Polygonum	- -	- -	8	10	10	102
	Rumex	- -	- -	9	10	11	97
			Oxyria	..	..	1	1
CHENOPODIACEÆ	Chenopodium	- -	- -	8	13	14	54
	Atriplex	- -	- -	2	6	7	42
	- -	Salicornia	- -	..	2	4	18
		Beta	- -	..	1	1	7
		Salsola	- -	..	2	2	50
ELÆAGNACEÆ	- -	Hippophae	- -	..	..	1	1
THYMELIACEÆ	Daphne	- -	- -	1	2	2	31
SANTALACEÆ	- -	Thesium	- -	..	1	1	33
PLANTAGINACEÆ	Plantago	- -	- -	4	5	5	116
		Litorella	- -	..	1	1	1
PLUMBAGINACEÆ	- -	Statice	- -	..	2	3	70
		Armeria	- -	..	1	1	90
OROBANCHACEÆ	Orobanche	- -	- -	1	3	6	31
		Lathræa	- -	..	1	1	1
SCROPHULARACEÆ	Veronica	- -	- -	10	12	18	136
	Limosella	- -	- -	1	1	1	1
	Rhinanthus	- -	- -	1	2	2	10
	Bartsia	- -	- -	1	1	3	7
	Euphrasia	- -	- -	1	1	1	31
	Pedicularis	- -	- -	2	2	2	57
	Digitalis	- -	- -	1	1	1	29
	Scrophularia	- -	- -	2	3	4	48
	Antirrhinum	- -	-	1	2	2	10
	Linaria	- -	- -	4	6	6	93
	Melampyrum	- -	- -	1	2	4	7
			Sibthorpia	..	..	1	3
VERBENACEÆ	Verbena	- -	- -	1	1	1	45
LABIATÆ	Lycopus	- -	- -	1	1	1	6
	Mentha	- -	- -	4	9	13	35
	Teucrium	- -	- -	1	2	3	79
	Ajuga	- -	- -	1	2	4	14
	Glechoma	- -	- -	1	1	1	2
	Betonica	- -	- -	1	1	1	9
	Thymus*	- -	- -	1	4	4	54
	Lamium	- -	- -	3	5	5	19
	Galeobdolon	- -	- -	1	1	1	1
	Galeopsis	- -	- -	1	3	4	7
	Scutellaria	- -	- -	2	2	2	38
	Stachys	- -	- -	3	4	5	53
	Ballota	- -	- -	1	1	1	2
	Marrubium	- -	- -	1	1	1	20
	Prunella	- -	- -	1	1	1	8
		Origanum	- -	1	1	1	19
		Clinopodium	- -	1	1	1	4
		Nepeta	- -	1	1	1	43
		Leonurus	- -	1	1	1	10
		Salvia	- -	..	2	2	186
			Melittis	..	..	2	5

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kn. Sp.
OLEACEÆ	Fraxinus	- -	- -	1	1	2	41
	Ligustrum	- -	- -	1	1	1	4
APOCYNACEÆ	Vinca	- -	- -	1	2	2	50
GENTIANACEÆ	Menyanthes	- -	- -	1	1	1	1
	Erythræa	- -	- -	1	1	4	16
		Gentiana	- -	..	2	6	110
		Chlora	- -	..	1	1	3
		Villarsia	- -	..	1	1	11
		Exacum	- -	..	1	1	14
CONVOLVULACEÆ	Convolvulus	- -	- -	2	3	3	335
		Cuscuta	- -	..	2	2	23
BORAGINACEÆ	Borago	- -	- -	1	1	1	6
	Lycopsis	- -	- -	1	1	1	14
	Symphytum	- -	- -	1	2	2	10
	Cynoglossum	- -	- -	1	2	2	40
	Lithospermum	- -	- -	1	3	4	40
	Myosotis	- -	- -	4	6	7	42
	Echium	- -	- -	1	1	2	80
			Pulmonaria	..	..	2	19
		Anchusa	- -	..	1	1	50
		Asperugo *	- -	..	1	1	1
SOLANACEÆ	Solanum	- -	- -	2	2	2	300
	Verbascum*	- -	- -	2	5	7	74
	Datura	- -	- -	1	1	1	10
		Hyoscyamus	- -	..	1	1	13
		Atropa	- -	..	1	1	14
LENTIBULACEÆ	- -	Pinguicula	- -	..	1	4	15
		Utricularia	- -	..	2	3	63
PRIMULACEÆ	Primula	- -	- -	2	3	5	62
	Lysimachia	- -	- -	2	3	4	29
	Hottonia	- -	- -	1	1	1	3
	Anagallis	- -	- -	1	3	3	14
		Samolus	- -	..	1	1	3
		Glaux	- -	..	1	1	1
		Centunculus	- -	..	1	1	4
			Trientalis	..	..	1	2
			Cyclamen	..	..	1	10
VACCINIACEÆ	Vaccinium	- -	- -	1	1	3	57
with		Oxycoccus	- -	..	1	1	4
MONOTROPACEÆ		Monotropa	- -	..	1	1	4
PYROLACEÆ	- -	Pyrola	- -	..	1	6	10
ERICACEÆ	Erica	- -	- -	2	2	5	540
	Calluna	- -	- -	1	1	1	1
			Menziezia	..	..	2	9
			Andromeda	..	..	1	44
			Arbutus	..	..	3	17
			Ledum	..	..	1	4
CAMPANULACEÆ	Campanula	- -	- -	1	8	9	220
		Jasione	- -	..	1	1	5
		Phyteuma	- -	..	1	1	36
			Lobelia	..	..	2	174

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kn. Sp.*
COMPOSITÆ	Eupatorium	- -	- -	1	1	1	148
	Bidens	- -	- -	2	2	2	43
	Tanacetum	- -	- -	1	1	1	21
	Artemisia	- -	- -	1	4	6	120
	Gnaphalium	- -	- -	3	8	10	24
	Arctium	- -	- -	2	2	2	4
	Carduus with Cnicus	- -	- -	6	10	13	194
	Onopordum	- -	- -	1	1	1	14
	Centaurea	- -	- -	3	6	7	182
	Serratula	- -	- -	1	1	2	40
	Tragopogon	- -	- -	1	1	2	17
	Picris	- -	- -	1	2	2	7
	Sonchus	- -	- -	2	3	4	40
	Lactuca	- -	- -	2	2	2	37
	Prenanthes	- -	- -	1	1	1	19
	Leontodon	- -	- -	1	2	2	18
	Apargia	- -	- -	3	3	4	25
	Hypochæris	- -	- -	1	2	3	14
	Hieracium	- -	- -	4	5	19	143
	Crepis	- -	-	1	3	4	47
	Lapsana	- -	- -	1	2	2	10
	Tussilago	- -	- -	1	2	2	15
	Senecio	- -	- -	7	8	10	130
	Solidago	- -	- -	1	1	1	70
	Pulicaria	- -	- -	2	2	2	2
	Bellis	- -	- -	1	1	1	6
	Chrysanthemum	- -	- -	2	2	2	36
	Pyrethrum	- -	- -	2	2	3	49
	Matricaria	- -	- -	1	1	1	5
	Anthemis	- -	- -	2	3	5	49
	Achillea	- -	- -	2	2	4	74
		Conyza	- -	..	1	1	62
		Erigeron	- -	..	2	4	56
		Aster	- -	..	1	1	160
		Carlina	- -	..	1	1	18
		Cichorium	- -	..	1	1	7
		Cineraria	- -	..	1	2	51
			Inula	..	..	1	41
			Diotis	..	..	1	1
			Chrysocoma	..	..	1	32
			Doronicum	..	..	2	8
DIPSACEÆ	Dipsacus	- -	- -	3	3	3	13
	Scabiosa	- -	- -	2	3	3	71
VALERIANACEÆ	Valeriana	- -	- -	2	3	4	84
	Fedia	- -	- -	1	2	2	24
RUBIACEÆ	Galium	- -	- -	6	10	16	150
Sub-Ord. Stellatæ	Asperula	- -	- -	1	2	3	38
	Sherardia	- -	- -	1	1	1	1
			Rubia	..	..	1	43
CAPRIFOLIACEÆ	Lonicera	- -	- -	3	3	3	53

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kn. Sp.
CAPRIFOLIACEÆ —(*continued.*)	Viburnum	- -	- -	2	2	2	51
	Sambucus	- -	- -	1	2	2	17
	Cornus	- -	- -	1	1	2	14
		- -	Linnæa	..	..	1	1
LORANTHACEÆ	- -	Viscum	- -	..	1	1	..
CUCURBITACEÆ	Bryonia	- -	- -	1	1	1	60
LYTHRACEÆ	Lythrum	- -	- -	1	1	2	18
	Peplis	- -	- -	1	1	1	4
ILLECEBRACEÆ	Scleranthus	- -	- -	1	2	2	3
			Corrigiola	..	..	1	3
			Herniaria	..	..	2	12
			Polycarpon	..	..	1	3
PORTULACEÆ	Montia	- -	- -	1	1	1	..
TAMARIXACEÆ	- -	Tamarix	- -	1	1	1	18
CRASSULACEÆ	Sempervivum	- -	- -	1	1	1	34
	Sedum	- -	- -	2	7	11	88
			Tillæa	..	..	1	6
		Cotyledon	- -	..	1	2	29
DROSERACEÆ	Drosera	- -	- -	1	2	3	32
CRUCIFERACEÆ	Draba	- -	- -	1	1	5	63
	Alyssum	- -	- -	1	1	1	52
	Lepidium	- -	- -	1	4	4	58
	Capsella	- -	- -	1	1	1	1
	Cochlearia	- -	- -	1	3	5	32
	Senebiera	- -	- -	2	2	2	5
	Cheiranthus	- -	- -	1	1	1	14
	Nasturtium	- -	- -	2	4	4	27
	Sisymbrium	- -	- -	1	3	3	53
	Barbarea	- -	- -	2	2	2	6
	Cardamine	- -	- -	3	3	5	58
	Arabis	- -	- -	1	1	6	66
	Alliaria	- -	- -	1	1	1	2
	Erysimum	- -	- -	1	1	2	44
	Brassica	- -	- -	3	3	4	36
	Sinapis	- -	- -	4	4	5	46
	Raphanus	- -	- -	1	1	2	9
	Iberis	- -	- -	1	1	1	26
		Turritis	- -	..	1	1	1
		Teesdalia	- -	..	1	1	2
		Dentaria	- -	..	1	1	16
		Isatis	- -	..	1	1	18
		Thlaspi	- -	..	1	3	17
			Vella	..	..	1	2
			Crambe	..	..	1	14
			Cakile	..	..	1	3
			Subularia	..	..	1	1
			Cammelina	..	..	1	6
		Hutchinsia	- -	..	1	1	11
ACERACEÆ	Acer	- -	- -	2	2	2	29
RHAMNACEÆ	Rhamnus	- -	- -	2	2	1	57
CELASTRACEÆ	Euonymus	- -	- -	1	1	1	12

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kwn. Sp.
AQUIFOLIACEÆ	Ilex	- -	- -	1	1	1	3
VIOLACEÆ	Viola	- -	- -	5	9	9	10
CARYOPHYLLACEÆ	Silene	- -	- -	1	6	10	21
	Lychnis	- -	- -	2	2	4	
	Agrostemma	- -	- -	1	1	1	15
	Stellaria	- -	- -	4	5	8	5
	Arenaria	- -	- -	3	5	9	14
	Cerastium	- -	- -	3	5	8	6
	Spergula	- -	- -	1	3	5	14
	Sagina	- -	- -	2	2	3	9
	Mœnchia	- -	- -	1	1	1	1
		Dianthus	- -	..	3	5	113
			Buffonia	..	..	1	4
			Cherleria	..	..	1	2
			Elatine	..	..	1	4
			Holosteum	..	..	1	14
		Saponaria	- -	..	1	1	17
BALSAMINACEÆ	- -	Impatiens	- -	..	1	1	14
GERANIACEÆ	Geranium	- -	- -	..	10	13	66
		Erodium	- -	..	3	3	45
OXALACEÆ	Oxalis	- -	- -	1	2	2	..
LINACEÆ	Linum	- -	- -	2	3	4	54
		Radiola	- -	..	1	1	1
POLYGALACEÆ	Polygala	- -	- -	1	1	1	168
FUMARIACEÆ	Fumaria	- -	- -	1	3	3	10
		Corydalis	- -	..	2	3	31
LEGUMINACEÆ	Orobus	- -	- -	1	1	3	39
	Lathyrus	- -	- -	1	5	7	62
	Vicia	- -	- -	3	5	10	101
	Ervum	- -	- -	2	2	2	17
	Ornithopus	- -	- -	1	1	1	2
	Genista	- -	- -	3	3	4	76
	Ulex	- -	- -	1	2	2	3
	Ononis	- -	- -	1	1	1	106
	Trifolium	- -	- -	7	15	18	144
	Lotus	- -	- -	2	2	4	51
	Medicago	- -	- -	1	4	6	78
		Hippocrepis	- -	..	1	1	9
		Astragalus	- -	..	2	4	244
		Anthyllis	- -	..	1	1	21
		Hedysarum	- -	..	1	1	34
			Pisum	..	..	1	8
HYPERICACEÆ	Hypericum	- -	- -	5	10	11	133
TILIACEÆ	Tilia	- -	- -	3	3	3	10
MALVACEÆ	Malva	- -	- -	3	3	3	82
		Althæa	- -	..	2	2	19
			Lavatera	..	..	1	26
PAPAVERACEÆ	Papaver	- -	- -	..	5	6	26
	Chelidonium	- -	- -	..	1	1	3
		Glaucium	- -	..	3	3	5
NYMPHÆACEÆ	Nymphæa	- -	- -	1	1	1	21
	Nuphar	- -	- -	1	1	1	6

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kwn. Sp.
BERBERIDACEÆ	Berberis	- -	- -	1	1	1	38
			Epimedium	..	..	1	1
RANUNCULACEÆ	- -	Clematis	- -	..	1	1	86
	Thalictrum	- -	- -	..	1	4	52
	Anemone	- -	- -	1	3	4	49
	Caltha	- -	- -	1	1	2	11
	Ficaria	- -	- -	1	1	1	2
	Ranunculus	- -	- -	10	12	14	159
	Myosurus	- -	- -	1	1	1	2
		Adonis	- -	..	1	1	14
		Helleborus	- -	..	2	2	9
		Aquilegia	- -	..	1	1	13
		Delphinium	- -	..	1	1	53
			Trollius	..	..	1	5
			Aconitum	..	..	1	22
			Pæonia	..	..	1	16
			Actæa	..	..	1	9
CISTINACEÆ	Helianthemum	- -	- -	1	1	7	124
ROSACEÆ							
Sub-Orders.							
Amygdalineæ	Prunus	- -	- -	5	5	5	50
Pyrineæ	Pyrus	- -	- -	5	6	7	46
	Cratægus	- -	- -	1	1	1	52
		Mespilus	- -	..	1	2	7
Rosineæ	Rosa	- -	- -	4	5	17	150
Spirineæ	Spiræa	- -	- -	1	3	3	46
Potentillineæ	Geum	- -	- -	1	1	2	37
	Agrimonia	- -	- -	1	1	1	9
	Rubus	- -	- -	6	6	10	116
	Fragaria	- -	- -	1	2	2	13
	Potentilla	- -	- -	3	4	11	126
	Tormentilla	- -	- -	1	2	2	2
		Comarum	- -	..	1	1	1
			Sibbaldia	..	..	1	7
			Dryas	..	..	1	3
	Alchemilla	- -	- -	1	2	3	11
Sanguisorbineæ	- -	Poterium	- -	..	1	1	7
		Sanguisorba	- -	..	1	1	7
UMBELLIFERÆ	Hydrocotyle	- -	- -	1	1	1	60
	Sanicula	- -	- -	1	1	1	3
	Heracleum	- -	- -	1	1	1	34
	Sium	- -	- -	4	5	6	28
	Sison	- -	- -	1	2	2	16
	Pimpinella	- -	- -	2	2	3	10
	Torilis	- -	- -	3	3	3	9
	Daucus	- -	- -	1	1	2	21
	Bunium	- -	- -	1	1	1	4
	Cnidium	- -	- -	1	1	2	39
	Angelica	- -	- -	1	2	2	13
	Œnanthe	- -	- -	2	5	5	23

Orders and Sub-Orders in London Flora.	Genera in Hampstead Flora.	Genera in London Flora.	Genera in Flora Britannica.	Hamp. Sp.	Lond. Sp.	Brit. Sp.	Kwn. Sp.
UMBELLIFERÆ—(*continued.*)	Æthusa	- -	- -	1	1	1	4
	Scandix	- -	- -	1	1	1	10
	Chærophyllum	- -	- -	3	3	6	28
	Ægopodium	- -	- -	1	1	1	1
	Conium	- -	- -	1	1	1	4
	Pastinaca	- -	- -	1	1	1	11
		Bupleurum	- -	1	2	4	37
		Anthriscus	- -	..	1	2	9
		Cicuta	- -	..	1	1	4
		Anethum	- -	..	1	1	..
		Apium	- -	..	1	1	6
		Caucalis	- -	..	1	2	27
		Smyrnium	- -	..	1	1	10
			Meum	..	..	1	4
			Tordyllium	..	..	2	9
			Ligusticum	..	..	2	20
			Silenum	..	..	1	23
			Imperatoria	..	..	1	3
			Carum	..	..	1	2
			Echinophora	..	..	1	3
			Athamanta	..	..	1	14
			Crithmum	..	..	1	4
			Coriandrum	..	..	1	3
		Eryngium	- -	..	1	2	58
ARALIACEÆ	Hedera	- -	- -	1	1	1	8
		Adoxa	- -	..	1	1	1
SAXIFRAGINACEÆ	Saxifraga	- -	- -	2	2	24	150
	Chrysoplenium	- -	- -	1	2	2	5
		Parnassia	- -	..	..	1	7
GROSSULACEÆ	Ribes	- -	- -	1	2	6	53
HALLORAGINACÆ	Myriophyllum	- -	- -	1	2	2	15
	Callitriche	- -	- -	1	2	2	4
		Hippurus	- -	1	1	1	3
ONAGRACEÆ	Epilobium	- -	- -	6	7	9	37
		Œnothera	- -	..	1	1	67
		Isnardia	- -	..	1	1	6
CIRCÆACEÆ	Circæa	- -	- -	1	1	2	2

Abstract of the above Table, showing the number of Genera and Species growing in the two districts, Hampstead and London.

Orders.	Gen. Hamp.	Gen. London.	Gen. Brit.	Gen. Known.	Hamp. Species.	Lond. Species.	Brit. Species.	Sp. Kwn. with Generic Types.	Sp. Known with Ordinal Types.
Filices	8	13	18	48	18	32	61	1082	1500
Characeæ	1	1	1	1	3	4	6	27	27
Pistiaceæ	1	1	1	2	4	4	4	5	7
Nayasaceæ	2	4	4	5	7	15	18	18	18
Typhaceæ	4	4	4	15	6	7	8	49	110
Junceæ, &c.*	2	4	5	6	14	20	34	78	150
Asphodeliaceæ†	2	5	6	36	2	9	19	158	400
Smilacinaceæ‡	3	6	6	12	3	6	9	26	140
Dioscoriaceæ	1	1	1	3	1	1	1	2	62
Butomaceæ .	1	1	1	1	1	1	1	2	4
Alismaceæ	2	3	3	3	3	4	6	10	26
Liliaceæ§	..	2	2	5	..	2	2	41	63
Hydrocharidaceæ	..	2	2	2	..	2	3	3	..
Iridaceæ	1	2	3	24	1	5	7	94	275
Amaryllaceæ	1	3	3	25	2	5	5	92	280
Orchidaceæ	3	8	11	73	4	28	38	65	750
Cyperaceæ	5	9	11	16	33	54	90	435	1000
Graminaceæ	25	32	37	120	57	90	115	700	..
Coniferaceæ	2	3	3	13	2	3	4	72	120
Amentaceæ	9	10	10	13	30	..	78	370	550
Ulmaceæ	1	1	1	3	5	5	7	13	32
Ceratophyllaceæ	1	1	1	1	2	2	2	2	..
Urticaceæ	3	3	3	20	5	5	5	136	336
Euphorbiaceæ	2	3	3	34	7	9	16	225	580
Resedaceæ	1	1	1	2	1	2	3	83	85
Polygonaceæ	2	2	3	11	17	20	22	200	256
Chenopodiaceæ	2	5	5	25	10	23	27	170	340
Elæagnaceæ	..	..	1	4	..	..	1	1	..
Thymeliaceæ	1	1	1	10	1	2	2	31	123
Santalaceæ	..	1	1	8	..	1	1	33	40
Plantaginaceæ	1	2	2	2	4	5	5	116	134
Orobanchaceæ	1	2	2	2	1	4	7	32	..
Lentibulaceæ	..	2	2	2	..	3	7	78	..
Scrophularaceæ	11	11	12	48	25	37	51	429	750
Verbenaceæ	1	1	1	25	1	1	1	36	300
Labiatæ	15	20	21	57	24	45	55	347	578
Oleaceæ	2	2	2	10	2	2	3	45	106
Apocynaceæ	1	1	1	21	2	2	2	50	197
Gentianaceæ	2	6	6	15	2	7	15	150	206
Convolvulaceæ	1	2	2	12	2	5	5	358	428
Boraginaceæ	7	9	10	22	10	18	24	302	430

* With *Juncaginaceæ*.
† Comprehending Scillineæ and Anthericineæ.
‡ Comprehending Convallarineæ, Asparagineæ, and Melanthaceæ.
§ Comprehending Tulipineæ.

Orders.	Gen. Hamp.	Gen. London.	Gen. Brit.	Gen. Known.	Hamp. Species.	Lond. Species.	Brit. Species.	Sp. Known with Generic Types.	Sp. Known with Ordinal Types.
Solanaceæ	2	4	4	24	3	5	5	401	541
Primulaceæ	4	7	9	16	6	11	19	108	140
Vacciniaceæ	1	3	7	14	1	3	12	131	173
Ericaceæ	2	2	2	11	3	3	6	541	604
Campanulaceæ	1	3	4	10	11	10	13	437	479
Compositæ	31	37	41	250	59	90	132	1533	5000
Dipsaceæ	2	2	2	4	5	6	6	84	102
Valerianceæ	2	2	2	4	3	6	8	180	140
Rubiaceæ (Stellatæ)	3	3	4	7	8	13	21	190	252
Caprifoliaceæ	4	4	5	9	7	8	10	136	157
Loranthaceæ	..	1	1	2	..	1	1	1	327
Cucurbitaceæ	1	1	1	10	1	1	1	60	123
Lythraceæ	2	2	2	11	2	2	3	22	78
Illecebraceæ	1	1	4	9	1	2	7	21	63
Portulaceæ	1	1	1	9	1	1	1	1	60
Crassulaceæ	2	3	4	10	3	8	15	157	200
Droseraceæ	1	1	1	2	1	2	3	32	45
Cruciferaceæ	18	23	28	70	29	44	72	601	1[illegible]
Aceraceæ	1	1	1	2	2	2	2	29	32
Rhamnaceæ	1	1	1	10	2	2	2	57	120
Celastraceæ*	1	1	1	5	1	1	1	13	41
Aquifoliaceæ	1	1	1	9	1	1	1	38	73
Violaceæ	1	1	1	3	5	9	9	105	178
Caryophyllaceæ	9	11	16	24	18	34	60	527	567
Geraniaceæ	2	2	2	4	4	13	16	121	490
Oxalaceæ	1	1	1	3	1	2	2	154	160
Plumbaginaceæ	..	2	2	3	..	3	4	168	179
Linaceæ	1	2	2	2	2	4	5	55	..
Polygalaceæ	1	1	1	4	1	1	1	154	271
Fumariaceæ	2	2	2	6	1	5	6	41	69
Leguminaceæ	11	15	16	160	23	48	69	995	2034
Hypericaceæ	1	1	1	2	5	10	11	133	140
Tiliaceæ	1	1	1	10	3	3	3	10	73
Malvaceæ	1	2	3	18	3	5	6	127	212
Papaveraceæ	2	3	3	10	3	9	10	34	76
Nymphæaceæ	2	2	2	4	2	2	3	27	41
Ranunculaceæ	6	11	15	25	14	25	36	500	568
Berberidaceæ	1	1	2	6	1	1	2	39	45
Cistinaceæ	1	1	1	4	1	1	5	124	161
Rosaceæ	12	15	17	37	30	38	53	800	900
Umbelliferæ	18	26	36	62	27	42	65	541	641
Araliaceæ	1	2	3	8	1	2	3	14	..
Saxifraginaceæ	2	2	2	7	3	4	28	163	207
Grossulaceæ	1	1	1	1	1	2	6	53	53
Halloraginaceæ	2	4	4	7	2	6	6	22	43
Onagrariaceæ	2	3	3	9	6	9	11	110	152
Circæaceæ	1	1	1	1	1	1	2	2	..

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* With Stapyleaceæ.

A few Plants of the following Orders are found in Britain.

ORDERS.	Brit. Gen.	Known Gen.	Brit. Species.	Kn. Species.	
FRANKENIACEÆ	1	1	2	16	18
POLEMONIACEÆ	1	7	1	13	..
EMPETRACEÆ	1	3	1	3	..
AMARANTHACEÆ	1	41	1	45	..
RESTIACEÆ	1	20	1	47	..

N. B.—The British Plants, without Ordinal Types in the London District are six, and probably fewer. *Frankenia lævis*, on the Rev. Professor Henslow's authority, grows in Kent.

Polemonium is not very rare in the High Peak, Derbyshire.

Amaranthus blitum is, perhaps, not rare in rubbish, about gardens, though the author does not remember having met with it.

Eriocaulon septangulare does not grow in these parts. The lakes of the Western Highlands and Isles are its localities.

Empetrum is abundant on Highland moors.

LINNÆAN ARRANGEMENT
OF THE
BRITISH PLANTS.

OUTLINE.

Class I to XI, inclusive, characterized by the number of stamens.
Classes XII and XIII, by the insertion of the stamens.
Classes XIV and XV, by the inequality of the stamens.
Classes XVI, XVII, and XVIII, by the connexion of the stamens by their filaments.
Class XIX, by the connexion of the stamens by their anthers.
Class XX, by the gynandrous flowers, *i.e.* pistil antheriferous.
Classes XXI, XXII, and XXIII, have barren and fertile flowers on the same plant, but on different parts; or barren on one plant, and fertile on another; or both barren and fertile flowers on the same plant.

The orders of the Classes, from Class I, to Class XIII, inclusive, are distinguished by the number of styles (pistils).
In Classes XIV and XV, by the form of the fruit.
In Classes XVI, XVII, XVIII, XX, XXI, XXII, XXIII, by the number of stamens.
In Class XIX, by the form and arrangement of the florets.

Class I.—MONA'NDRIA.—(One stamen.)

Order I.—MONOGY'NIA.—(One style.)

SALICO'RNIA (Glasswort).—See *Chenopodiacéæ*, in the other arrangement.
S. *herbácea* (Jointed Glasswort.)
Var. β. S. *procúmbens*. Stem procumbent.
S. *radícans* (Creeping Glasswort).
The various species of this genus abound in soda, which is used in the manufacture of glass; hence the English name.
They are confined to sea-shores, and the margins of salt water rivers.
HIPPU'RIS (Mare's-tail).—See *Haloragíneæ* (*Onagráceæ*), p. 200.
ZOSTE'RA (Grasswrack).—See *Nayasáceæ*, p. 85.
This genus is removed to Class *Monœcia* (Hooker's Flora).

Order II.—DIGY'NIA.

CA'LLITRICHE (Water Starwort).—See Sub-order, *Haloragineæ.*

This genus is now placed in *Monœcia.*—(Hooker's Flora.)

Class II.—DIA'NDRIA.—(Two stamens.)

Order I.—MONOGY'NIA.—(One style.)

LIGU'STRUM (Privet).—See *Oleáceæ*, pp. 136, 137.

FRA'XINUS (Ash).—See ditto, p. 137.

F. *heterophy'lla.*—Leaves both simple and compound, ternate, quinate, or pinnate.

A variety of F. *excélsior*—(Hooker).

VERO'NICA (Speedwell).—See *Scrophularáceæ*, pp. 128, 129.

BRITISH SPECIES GROWING BEYOND THE LIMITS ASSIGNED TO THE FIRST PART OF THIS FLORA.

V. *spicáta*, and *hy'brida* have a spicate florescence; erect, or semi-erect stem; sessile and serrulate leaves. The latter is the larger, and of a more rigid and hairy habit, and has larger flowers.

They grow on elevated pastures; Newmarket and Bury. Sir Wm. J. Hooker considers V. *hy'brida* a variety of V. *spicáta.*

V. *saxátilis, fruticulósa*, and *alpína*, have a corymbous, somewhat clustered florescence terminating the stem.

V. *saxátilis* is known by its few large flowers, spreading stem, and elliptic leaves. V. *fruticulosa* by its many-flowered, spicate corymb, elliptic, lanceolate leaves, and erect stem. V. *alpína* by its ascending, simple stem; ciliated calyx, small flowers, and elliptic capsule.

The above are perennials; they grow on or near the summits of the Highland mountains, Breadalbane and Clova, Ben Cruachan, Argyleshire, &c.

V. *triphy'llos* is known from all these by its annual root and solitary flowers; from those of its own section, viz. *arvénsis, hederifólia, vérna*, &c., by its upper leaves being digitate (finger-shaped), peduncles longer than the calyx, spreading habit, obtuse sepals, flat seeds, &c. V. *triphy'llos* is found in sandy fields about Bury, and on the confines of Norfolk and Suffolk.

Two species, or varieties, have recently been added to the British Flora, viz., V. *hirsúta*, which differs from V. *officinális* in the oval, lanceolate, acute, slightly serrated leaves, and in the obcordate capsule.

Carrick, Ayrshire—Mr. J. Smith.

V. *políta* approaches V. *agréstis*, said to be distinguished by the flower stalks being longer than the leaves, and by the acute segments of the calyx.

Found with *agréstis.*

CIRCÆ'A (Enchanter's Nightshade).—See *Circineæ*, p. 200.

C. *alpína* (Alpine ditto).—Usually distinguished from *lutetiána* by its cordate, serrated, shining leaves, and by its membranous calyx.

A smaller and smoother plant with more floral racemes.

PINGUI'CULA (Butterwort).—See *Lentibuláceæ*, p. 131.

P. *vulgáris* (Common ditto).—Most abundant in the north. Castle Rising, near Lynn,—The Rev. George Munford.

P. *lusitánica* (Pale ditto).—Known from *vulgáris* by the regular limbed, pinkish corolla, globular capsule and hairy scape.
Hampshire.

P. *grandiflóra* (Large-Flowered ditto), is distinguished from both by its much larger flower.
Marshes, west of Ireland.

P. *alpína* (Alpine ditto).—Spur conical, shorter than the unequal limb of the corolla, and curved towards the lower retuse lip. Scape glabrous.
West of Scotland and Ireland, very rare.

UTRICULA'RIA (Milfoil).—See *Lentibuláceæ*, p. 131.

U. *vulgáris* and U. *minor* (Common and less Milfoil).—Ditches, pools, in fenny parts, not rare; Huntingdon, Cambridge, Lincoln, and other fens. U. *minor*, Roydon Fen—The Rev. G. Munford.

U. *intermédia* (Intermediate ditto).—Leaves crowded, three-parted.
Lakes, Ireland. Roscobie lake, Forfar. Elginshire.

LE'MNA (Duckweed).—See *Pistiáceæ*, p. 84.

L. *minór*, *polyrrhiza*, *trisúlca*, *gibba* (Less, greater, Ivy-leaved, and gibbous ditto).

LY'COPUS (Water-horehound).—See *Labiátæ*, p. 132.

SA'LVIA (Sage).—See *Labiátæ*, p. 136.

S. *verbenáca*. S. *praténsis* (Wild Sage. Meadow ditto).—Latter. Very rare.

CLA'DIUM (Twig Rush). See Order *Cyperáceæ*, p. 89.

C. *mariscus*.—(Prickly Twig Rush.)—Moors, about Cambridge.

Order II.—DIGY'NIA.—(Two stamens.)

ANTHOXA'NTHUM (Yellow Vernal Grass).—See *Gramináceæ*, p. 95.

A. *odorátum* (Sweet-scented ditto).

CLASS III.—TRIA'NDRIA.—(Three stamens.)

Order I.—MONOGY'NIA.—(One style.)

VALERIA'NA (Valerian).—See *Valerianáceæ*, p. 156.

V. *pyrenáica*.—Cauline leaves petioled, cordate, serrated. Upper leaves pinnate.
Scottish woods. (Surely not a native)—Hooker.

FE'DIA (Corn Salad.)—See *Valerianáceæ*, p. 156.

F. *olitória* and *dentáta* (Common and smooth ditto).—Cornfields, the latter rare.

F. *auricula*.—Fruit broader and more inflated than in F. *dentáta*, furrowed in front, crowned with a single tooth of the limb of the calyx.
Lindulph, Cornwall—Rev. R. T. Bree.

CRO'CUS.—See *Iridáceæ*, p. 103.

C. *satívus* (Saffron).—Stigma in three deep linear divisions, drooping.
Naturalized in meadows, Cambridgeshire.

C. *vérnus* (Spring Crocus).—Stigma divided into three jagged wedge-shaped lobes.
Nottingham.

C. *mínimus* (Least Crocus).—Leaves linear, filiform. Bulb with a membranous coat.
Sir H. Bunbury's park, Barton, Suffolk.

C. *aúreus* (Golden Crocus).—Two-flowered. Bulb coated with fibres.
Same locality.

C. *nudiflórus* (Late Flowering Crocus).—Flowers appearing before the leaves.

Nottingham.

C. *speciósus* (Showy Autumnal Crocus).—Differs from *nudiflórus* in the segments of the stigma, being longer than the stamens.

Meadows, about Warrington.

TRICHONE'MA, of the same order (*Iridáceæ*).

Differs from *Crócus* in the tube being shorter than the limb, in the hairy filiments, and the two-parted stigma.

T. *colúmnæ* (Columna's ditto.)—Scape one-flowered, very short (two inches). Leaves linear, channelled. Stigma bipartite.

Channel Islands.

The other European species, T. *bulbocódium*, is known from this by its much larger flowers.

I'RIS (Flag).—See *Iridáceæ*, p. 108.

I. *pseudácorus* and I. *fœtidissima* (Yellow and fetid ditto).

The former in watery places, the latter in woods.

CYPE'RUS (Galingale).—See *Cyperáceæ*, p. 88.

C. *lóngus* (Sweet ditto).—Very rare. Marsh, near St. David's, Walton-in-Gordon, Somersetshire. Boyton, Wilts.

C. *fúscus* (Brown Cyperus).— Bog, near Little Chelsea—A. Haworth, Esq.

In Sprengel's Species Plantarum, about 300 species are enumerated and described. They are mostly tropical.

SCHŒ'NUS (Bog Rush).—See *Cyperáceæ*, p. 88.

S. *nigricans* (Black Bog Rush).—In wet moory parts.

RHYNCHO'SPORA (Beak Rush).—See *Cyperáceæ*, p. 88.

R. *álba* (White Beak Rush).—On wet moors and bogs.

R. *fúsca* (Brown Beak Rush).—Spiklets capitate, much shorter than the outer bracts.

Bogs, south-west of England and Ireland.

SCI'RPUS (Bull-Rush or Club-Rush).—See *Cyperáceæ*, p. 89.

S. *lacústris* (Lake Club-Rush).

Var. β. S. *glaúcus*. Smaller and glaucous.

S. *holoschœ'nus* (Cluster-Headed Rush).—Spiklets collected into compact, globular, sessile, or stalked heads. Leaves subulate, channelled.

Sandy sea-shore, in the extreme South and West of England.

S. *setáceus* (Bristle-stalked ditto).—See *Isolépis setácea*, p. 89.

S. *sávii*.—Stem (culm) leafy below. Spiklets one to three, terminal shorter than the unequally two-leaved involucre. Fruit subglobose, rough, with slightly elevated points.

Bogs, in Ireland, Anglesea, Jersey, and Devonshire.

S. *triqueter* (Triangular Club-Rush).—Banks of rivers.

S. *carinátus* (Blunt-Edged Rush).—River sides, Arun, Sussex.

S. *marítimus* (Salt Marsh Rush).—Salt marshes.

S. *sylváticus* (Wood Rush).—Moist woods.

BLY'SMUS (Sedge Rush).—See *Cyperáceæ*, p. 88.

B. *compréssus* (Broad-leaved ditto).—Not uncommon near the sea.

B. *rúfus* (Narrow-leaved ditto).—"Bracts equal, membranous. Leaves very narrow. No bristles under the fruit."

Near the sea, particularly in Scotland; also about the Welsh, English, and Irish coasts, on the west.

ELEOCHA'RIS (Spike Rush).—See *Cyperáceæ*, p. 88.

E. *palústris* and E. *multicaúlis* (Creeping and Many-stalked ditto). Common about the grassy borders of ponds, &c.

E. *cæspitósa* (Scaly-stalked ditto).—Common on marshy moors and hilly places.

E. "*pauciflóra* (Few-flowered Spike Rush) is characterized by its round stem (culm) and leafless sheaths. Outer glumes large, but shorter than the spike; in *cæspitósa*, these are longer than the very short spike. "Not uncommon in Scotland, Yarmouth, Norfolk, Anglesea, and Bangor."

E. *flúitans* (Floating Spike ditto).—See *Isolépis flúitans*.—In ponds and pools which are dried up in the summer.

ERIO'PHORUM (Woolly-headed Cotton-Grass).—See *Cyperáceæ*, p. 89.

E. *capitátum*.—Spike almost globular.—On Ben Lawers, near perpetual snow—Mr. G. Don.

E. *alpinum*.—Culm triangular. Spike oblong, ovate. Leaves shorter than the sheaths.

Northern bogs. Now supposed by some botanists extinct. It was discovered in the Moss of Restenet, near Forfar. Since the draining of the moss, the plant has not been found.

E. *vaginátum*.—At the foot of Addington hills, between Shirley and Coombe. Ashdown Forest? Roydon Fen—The Rev. G. Munford. These three species are known by their solitary spike.

Of the many-spiked species of *Erióphorum*, the E. *polystáchion*, and E. *angustifólium* are chiefly distinguished by size. E. *pubescéns* has downy peduncles; in E. *polystáchion* they are smooth. E. *pubescéns* is found in Kent, Cambridgeshire, and Wales.

E. *grácile* is distinguished from *angustifólium* by the down (hair) being shorter.

Sir W. J. Hooker states, that "Mr. Wilson has examined E. *polystáchion*, E. *angustifólium*, and E. *grácile*, in a living state, having seen them all growing together in Wales; and has sought carefully, but in vain, for permanent characters."

NA'RDUS (Mat-Grass).—See *Gramináceæ*, p. 102.

Order II.—DIGY'NIA.

PHA'LARIS (Canary-Grass).—See *Gramináceæ*, p. 95.

P. *canariénsis*.—Naturalized about London, Gravesend, Isle of Thanet, &c.

P. *arundinácea* (Reed Canary-Grass).—Not rare about rivers, ditches, and wet hedges.

PA'NICUM (Panic Grass).—See *Gramináceæ*, p. 96.

P. *crusgálli* (Cock's-foot ditto).—Battersea fields—Mr. Wm. Pamplin.

PHLE'UM (Timothy-Grass).—See *Gramináceæ*, p. 94.

Ph. *praténse* (Meadow ditto).—Meadows and upland pastures.

Var. β. with a bulbous or tuberous root, on dry banks, &c.

Ph. *alpínum* and *michélii* are alpine Scottish species. The former bears an ovate cylindric spike; the latter a close or spicate panicle. The former bears a short awn.

Breadalbane Mountains. Mountains of Clova.

Ph. *ásperum*.—"Panicle spiked, cylindric; outer glumes cuneate, mucronate, rough. Culms leafy, often branched."

West and Mid England, in dry, open fields.

Ph. *arenárium.*—Panicle spiked, oblong, obovate. Outer glumes lanceolate, acute, ciliated at the back. Culms five to six inches; many from the same root.

Loose sand near the sea.

Ph. *boehméri.*—Dry, sandy, and chalky fields, rare. Masham, Norfolk, rare—The Rev. George Munford.

ALOPECU'RUS (Fox-tail-Grass).—See *Graminácea*, p. 95.

A. *praténsis.*—In meadows. A. *agréstis.*—Cornfields. A. *bulbósus.*—Salt Marshes. A. *geniculátus* and *fúlvus.*—Pools, &c.

A. *alpínus.*—Outer glumes abrupt, hairy, equalling the awn of the inner glumes.

AMMO'PHILA (Sea-reed). See *Graminácea*, p. 95.

A. *arundinácea.*—Sandy sea-shores.

KNA'PPIA (Knapp's Grass). See *Graminácea*, p. 102.

K. *agrostídea.*—"Sandy pastures by the sea. Essex, near the mouth of the Thames. Anglesea, not unfrequent."

POLYPO'GON (Long-bearded Grass). See *Graminácea*, p. 94.

P. *monspeliénsis*, and P. *littorális.*—The former in pastures near the sea: the latter in salt marshes.

LAGU'RUS (Hare's-tail-Grass). See *Graminácea*. "Panicle spicate, (spiked). Outer glumes fringed, with feathery awns. One of the inner glumes bifid, with a dorsal awn."

L. *ovátus.*—"The only known species remarkable for its soft head of flowers with long silky awns."

"Very rare; sandy fields by the sea in Guernsey."

MI'LLIUM (Millet-Grass). See *Graminácea*, p. 94.

M. *effúsum.*—Moist woods; not rare.

GASTRI'DIUM (Nit-Grass).—See *Graminácea*.—Panicle contracted, spiked. Outer glumes membranous, ventricose at the base; much longer than the inner. Inner glumes investing the fruit; larger, with a dorsal awn.

G. *lendígerum.*—Outer glumes lanceolate, acuminate, with an awn of twice their length.

Rare. Isle of Sheppey; Weymouth; Norfolk.

CALAMAGRO'STIS (Reed-Grass).—See *Graminácea*, p. 94.

C. *epijégos.*—Hedges and moist places. South side of Weston wood, Albury.

C. *lanceoláta.*—Fens of Lincoln, Northamptonshire, &c.

C. *stricta.*—"Panicle erect, close. Outer glumes broadly lanceolate, acute, a little rough on the keel; inner glumes as long as the outer, and longer than the hairs, with a dorsal awn equal to it in length."

Roscobie Lake, four miles from Forfar—T. Drummond, Esq.

AGRO'STIS (Bent-Grass). See *Graminácea*, p. 93.

A. *canína.*—Heaths, &c.

A. *vulgáris.*—Meadows and pastures, very common.

A. *setácea.*—Downs in the south and west of England. Bagshot Heath—Mr. William Pamplin.

A. *spica-vénti.*—Rare. Cornfields at Kingston, Ham, and Okeham, Surrey. Tottenham, Midds.

A. *álba* (*stolonífera*).—Fiorin-Grass of Dr. Richardson. About roadsides, &c.; not rare.

A. *sylvática.*—Usually in woods; is accounted a variety of A. *álba*.

CATABRO'SA (Whorl Grass).—See *A'ira aquática*, p. 95.

A'IRA (Hair Grass).—See *Graminàceæ*, p. 95.

A. *cristáta*.—(Crested ditto).—Dry pastures.

A. *cæspitósa*.—Woods and borders of fields, common.

A. *alpína*.—Panicle sub-coarctate (rather close). Branches and pedicels very smooth. Florets villous (hairy) at the base; as long as the outer glumes. Awn inserted above the middle, scarcely exceeding the inner glume in length.

Moist rocks on the higher Scottish mountains.

A. *flexuósa*.—Heaths, abundant.

A. *caryophy'llea* and A. *præcox*.—On sandy hills and pastures; at Clapham Common, Hampstead, and Shere Heaths, &c.

A. *canéscens*.—Panicle compact. Culm three to four inches, leafy. Leaves setaceous. Awns swelling at the top, shorter than the outer glumes.

Sea-shore. Near Pegwell Bay, Kent--Rev. G. Smith, in Plants of S. Kent.

HO'LCUS (Soft Grass). See *Graminàceæ*, p. 97.

H. *móllis* and H. *lanátus*.—Common in meadowy pastures; the latter also in woods.

ARRHENATHE'RUM (Oat-like Grass).—See *Graminàceæ*, p. 97.

A. *avenáceum*.—About hedges, common.

HIEROCHLO'E (Holy-Grass).—Panicle lax. Outer glumes bearing three flowers; the lateral being triandrous, without a style (pistil); the central perfect, with two stamens. Named from being strewed about the doors of churches on festival days. See Gmelin, (Flora Siberica ?).

H. *boreális*.—" Panicle almost lateral, with awnless florets. One of the inner glumes ciliated.

Rare; in a narrow mountain valley, called Kella, Angus-shire, discovered by the late Mr. George Don."

SETA'RIA (Bristle-Grass).—See *Graminàceæ*, p. 96.

S. *verticilláta*.—" Panicle spiked, lobed below, branches whorled, bristles of the involucre rough, with reversed teeth."

"About London and Norwich."—Hooker's Flora.

S. *víridis*.—Same localities as the preceding, and the same authority.

ME'LICA (Melic-Grass).—See *Graminàceæ*, p. 97.

M. *uniflóra*.—Common in moist woods.

M. *nútans*.—Panicle close, unilateral. Outer glumes two-flowered.

" Woods, chiefly in the North of England and Scotland."

M. *cærúlea*.—A common grass in moors and wet heathy places, where it grows in large tufts, somewhat like *Cárex paniculáta*. It is very different in habit from M. *uniflóra* and M. *nútans*.

SESLE'RIA " (Blue Moor-Grass).—See *Graminàceæ*.—Panicle spicate. Outer glumes nearly equal, slightly awned; one of the inner glumes toothed and awned; the other two-toothed."

S. *cærúlea*.—Spike ovate, oblong, imbricated, with alternate bracts.

On limestone tracts, North of England and Scotland.

PO'A (Meadow-Grass).—See *Graminàceæ*, p. 98.

P. *aquática* and P. *fluitans*, abound in ditches and ponds.

P. *marít*. P. *dístans*, and P. *procúmbens*, grow near the sea.

P. *rigída*, and P. *compréssa*, on walls and dry places. See *Glycéria*, p. 97, for these seven species.

P. *alpína.*—Panicle spreading. Spiklets cordate, four-flowered.

Plentiful on lofty mountains of Wales and Scotland.

P. *láxa.*—See *flexuósa.*—Found on Ben Nevis, by the late Mr. John Mackay.

P. *flexuósa.*—Panicle flexuose. Spiklets three-flowered.

P. *bulbósa,*—"Panicle close, sub-spicate. Spiklets four-flowered. Florets downy at the keel, connected by a web. Leaves with a white, narrow, serrated, cartilaginous margin. Stems (culms) swollen at the very base."

Sandy-shores, East and South of England. It forms the principal part of the herbage on the Denes at Yarmouth.

P. *triviális* and P. *praténsis.*—Common meadow-grasses. The former is excellent both for hay and pasturage.

P. *nemorális.*—Not rare in woods.

P. *glaúca* of the English Flora, is reckoned a variety of this species by Sir Wm. J. Hooker.

P. *ánnua.*—Grows everywhere on rubbish, by roadsides, pastures, &c.

P. *cæ'sia.*—Panicle spreading. Spiklets five-flowered.

A var. of P. *nemorális,* Welsh and Scotch mountains.

P. *húmilis* and P. *glaúca* have three-flowered spiklets; in the former the panicle is spreading; in the latter it is attenuated. The outer glumes are acute in *húmilis,* and sub-retuse in *glaúca.*

Sprengel in Sp. Pl. describes above 150 species of *Póa,* and of *Agróstides* (Bents) 110.

TRI'ODIA (Three-toothed Grass). See *Gramináceæ,* p. 98.

T. *decúmbens.*—Heaths and Moors.

BRI'ZA (Quaking Grass). See *Gramináceæ,* p. 98.

B. *média.*—Common in meadows, pastures, &c.

B. *mínor.*—"Spiklets triangular, seven-flowered. Outer glumes longer than the florets.

"Fields, South of England; very rare."

DA'CTYLIS (Cock's-foot Grass). See *Gramináceæ,* p. 98.

D. *glomeráta* (Clustered ditto).—Fields, meadows, and hedges.

CYNOSU'RUS (Dog's-tail Grass).—See App.

C. *cristátus* (Crested ditto) —Pastures, &c.

C. *echinátus.*—Raceme in an ovate spike. Awns as long as the glumes.

"South of England; very rare. Jersey."

FESTU'CA (Fescue Grass).—See *Gramináceæ,* p. 98.

F. *ovína* and F. *duriúscula* are common pasture grasses.

F. *myúrus* and *bromoídes.*—Dry banks and walls.

F. *loliácea,* F. *praténsis,* and F. *elátior.*—Found in meadows.

F. *vivípara.*—Panicle erect, close, unilateral, nearly simple. Glumes awnless, with pubescence at the margin.

Alpine tracts.

F. *rúbra.*—Panicle unilateral. Florets tapering with awns.

Sea shores, &c.

F. *calamária* and *decídua.*—The former has a unilateral, erect, branching, close panicle. *Decídua* has a similar florescence, but differs in the leaves being linear, in the former ensiform.

BRO'MUS (Brome Grass).—See *Gramináceæ,* p. 99, 100.

B. *gigánteus* (See *Festúca gigántea*) and B. *ásper,* grow in woods and hedges. B. *sterílis,* in waste places. B. *diándrus,* on walls. B. *móllis* and *racemósus*, in pastures. B. *secalínus*, B. *velutínus*, and B. *arvénsis*, in cornfields. B. *eréctus* and its variety *praténsis*, on chalky pastures.

STI'PA.—The inner glume has a very long terminal awn, jointed at the base. Outer glumes containing only one floret.

S. *pinnáta*.—A doubtful native.

AVE'NA (Oat Grass).—Terminal awn of the inner glume articulated at the base.

A. *fátua*.—“ Panicle erect. Spiklet of three scabrous florets, with long awns, smaller than the outer glumes which are hairy below.”

This is thought to be the original of A. *satíva*, the common oat, and is not uncommon where the oat is cultivated.

A. *strigósa*, grows in cornfields, and is said to be common both in England and Scotland. Dee side, above Mar Lodge, Aberdeenshire.

A. *praténsis*, *pubéscens*, and *flavéscens*, are common on upland pastures, the two former on chalky downs.

A. *alpina*.—Spiklets erect, containing five to six florets. It is said to be distinct from A. *planicúlmis* by its stouter habit, and by the broader leaves.

Rocky places, on mountains.

A *planicúlmis*. — Panicle erect. Outer glumes about five-flowered. Leaves serrulated. Culm flattish.

Highland glens, Western Isles.

ARU'NDO (Reed Grass).—See *Gramináceæ*, p. 100.

A. *phragmítes*.—Ditches, rivers, and lakes.

LO'LIUM (Ray Grass).—See *Gramináceæ*, p. 101, 102.

L. *perénne*.—A common grass in meadows and in fields for hay.

L. *temuléntum*, and its variety *arvénse*, grow in cornfields.

ROTTBO'LLIA (Hard Grass).—See *Gramináceæ*, p. 102.

R. *incurváta*.—On sea shores.

Var. β. *filifórmis*, near Aberlady, Scotland.

E'LYMUS (Lyme Grass).—See *Gramináceæ*, p. 101.

E. *arenárius*, grows on sandy shores. and is a valuable plant for binding the loose soil by its long creeping roots.

E. *europæ'us*.—In woods.

E. *geniculátus*.—Very rare. Salt marshes, Gravesend.

TRI'TICUM (Wheat Grass).—See *Gramináceæ*, p. 101.

T. *canínum* and T. *repéns*.—Common in fields, &c.

T. *juncéum*.—Sea shore, Stonehaven, Scotland.

T. *cristátum*.—“ Spiklets crowded, bearing each four awned florets.

“ Sea side, between Arbroath and Montrose—Mr. G. Don.”

T. *loliáceum*.—Sea shore, Norfolk, Suffolk, &c.

HORDE'UM (Barley).—See *Gramináceæ*, p. 100, 101.

H. *murínum*, grows under walls, &c. Rare in Scotland.

H. *praténse*.—Meadows. Rare in Scotland.

H. *marítimum*.—Fields, &c., near the sea. Rare in Scotland.

BRACHYPO'DIUM.—See *Festúca*, p. 99.

B. *sylváticum*.—Common in Woods.

B. *pinnátum*.—Rather rare. Near St. Martha's Hill, Surrey.

SPARTI'NA (Cord Grass).—See *Gramináceæ*, p. 102.

S. *stricta* and S. *alternifólia*.—Shores near Southampton. The latter a discovery by the Rev. Dr. Bromfield.

DIGITA'RIA (Finger Grass).—See *Gramináceæ*, p. 102.

D. *sanguinális.*—Leaves and sheaths hairy. Florets oblong, glabrous, with scabrous margins.

Very rare. It formerly grew in Battersea fields.

D. *humifúsa.*—Weybridge, Surrey.

CY'NODON "(Dogs' Tooth Grass).—Spikes digitate or racemose. Spiklets unilateral. Glumes one-flowered, equal, spreading. Fruit coated with the hardened inner glume.

C. *dáctylon.*—Spikes three to five. Inner glume subciliated, longer than the outer, with a beardless bristle at the base.

Rare. Cornwall and Penzance."

Order III.—TRIGY'NIA.

MO'NTIA (Water Blinks).—See *Portuláceæ,* p. 160.

M. *fontána.*—Wet springy places, common.

Var. β. (*május*) Decandolle, not rare in Scotland and Wales.

HOLOSTE'UM (Jagged Chick-weed).—See *Alsináceæ.*—Calyx of five sepals. Corolla of five petals. Capsule subcylindric, bursting at the top, with six teeth.

H. *umbellátum.*—Erect, smooth. Flowers umbellate, white.

Old walls. Norwich and Bury, rare.

POLYCA'RPON (All-seed).—See *Illecebráceæ.*—Calyx and corolla like *Holostéum.* Capsule three-valved.

P. *tetraphy'llum* (Four leaved).—" Leaves of the stem whorled, in fours of the branches opposite.

Devonshire, Dorsetshire, and Portland Island."

Class IV.—TETRA'NDRIA.—(Four stamens.)

Order I.—MONOGY'NIA.—(One style.)

DI'PSACUS (Teasel).—See *Dipsáceæ,* p. 155.

D. *sylvéstris.*—Not rare about roadsides.

D. *fullónum.*—Cultivated for the sake of the heads, used by cloth workers for raising the nap on cloth.

D. *pilósus.*—Rare, Guildford, Surrey—Mr. Mills. Cudham, Kent; Ashford, Kent—Mr. William Pamplin.

SCABIO'SA (Scabious).—See *Dipsáceæ,* p. 155, 156.

S. *arvénsis.*—Grows in cornfields.

S. *succisa.*—In moist pastures. S. *columbária.*—On chalky downs.

SHERA'RDIA (Field Madder).—See *Stellátæ,* (Ord. *Rubiáceæ.*), 158.

S. *arvénsis.*—Common in fields.

ASPE'RULA (Woodroof).—See ditto, p. 157, 158.

A. *odoráta.*—Woods. A. *cynanchica.*—Downs.

A. "*arvénsis.*—Annual. Leaves six to ten in a whorl, linear, lanceolate, obtuse. Flowers terminal, surrounded by long ciliated bracts. Flowers bright blue. Fruit large."

" Mr. Banks, in Plymouth and Devonport Flora. Near Devonport. —Mr. C. A. Johns."

GA'LIUM (Cross Wort, Goose Grass, &c).—See *Stellátæ,* p. 157.

G. *vérum.*—Distinguished by its small yellow flowers.

Grows on dry banks, &c.,

G. *cruciátum.*—Has larger yellow flowers, and broad whorled leaves in fours.

Not so common; about hedges and woods.

G. *palústre.*—Leaves fours, shining and rather rigid. Flowers white.
Bogs and watery places.
Var. β. *G. Witheringii.* — Leaves five to six, rougher than *palústre.*

G. *uliginósum.*—Leaves acuminated, not obtuse as in *palústre*, also furnished with a mucro (prickle).
Ditches.

G. *saxátile.*—Very common on heaths.

G. *eréctum.*—Approaches *Mollúgo* in habit, but is rather more rigid and shining.
Chalky pastures, not common.
" Norfolk; Portslade, Sussex; Cambridge.
" Var. β. Leaves downy below. Plymouth—Mr. G. Banks."

G. *cinéreum.*—" Leaves in sixes or eights, linear, bristle pointed, with marginal prickles pointing forward. Stem branchy, weak.
Banks of the river Leith, near Slatford, three miles from Edinburgh—Don. Kinnaird, Angus—Mr. G. Don."

G. *aristátum.* — " Leaves in sixes, petiolate, lanceolate, flat, reticulate with veins. Bristle pointed, with minute marginal prickles pointing forward.
" Angus-shire—Mr. G. Don."

G. *mollúgo.*—Hedges and thickets, common in England, rare in Scotland.

G. *pusillum.*—" Leaves in eights, linear, lanceolate. Hair pointed, entire, slightly hairy.
" Limestone hills, near Kendal; Matlock, Derbyshire; Killarney,. Ireland; Pentland, Strathblane hills, and lower rocks of Clova, Scotland."

G. *parisiénse* (*ánglicum*).—Has the habit of G. *aparíne.*
Kent, about Gravesend, Cobham, &c.

G. *saccharátum.*—Leaves in sixes, lanceolate, margins rough, with prickles pointing forward. Fruit warted.
Cornfields—Discovered by Mr. G. Don, Carse of Gowrie; Malton, Yorkshire.

G. *tricórne.*—Chalky cornfields, Chipstead, Surrey.

G. *spúrium.*—" Leaves in eights, their margins as well as the stem rough, with reflexed prickles. Fruit smooth.
" Cornfields near Forfar—Mr. G. Don."

G. *boreále.*—" Leaves in fours, lanceolate, three-nerved, glabrous. Fruit muricated.
" On moist rocks, North of England, Wales, and Ireland."

G. *aparíne.*—The bristles of the fruit are hooked, as in the preceding species (*boreále*).
Common in hedges.

RU'BIA (Madder). See *Stellátæ.*—Corolla campanulate. Fruit a berry.

R. *peregrína.*—" Leaves about quadrinate, elliptic, smooth above. Flowers five-parted."
South Kent—Rev. G. Smith. " Anglesea—Mr. Wilson."

EXA'CUM (Gentianella).—See *Gentianáceæ.*—" Calyx and corolla, each four-cleft. Capsule one-celled, two-valved. Seeds adhering to two sutural receptacles."

E. *filifórme.*—"Stem dichotomous. Leaves linear, lanceolate, sessile. Peduncles longish.

"Sandy turf bogs, South and West of England."

PLANTA'GO (Plantain).—See *Plantagináceæ*, p. 126.

P. *májor*, P. *média*, and P. *lanceoláta.*—Grow in pastures and roadsides. P. *corónopus*, in barren gravelly places. P. *marítima*, by the sea-shore.

CENTU'NCULUS (Chaff-weed).—See Appendix.

C. *minimus.*—Moist, sandy, gravelly places. Brabourne, Hothfield, and Willesboro' Leas—Rev. G. E. Smith. "Norfolk, Suffolk, &c."

SANGUISO'RBA (Burnet).—See *Sanguisórbinea*, (Order *Rosáceæ*), p. 194.

S. *officinális.*—Pastures on a chalky or limestone soil.

S. *média.*—Spikes cylindric.

West of Scotland—Mr. G. Don, in English Flora.

EPIME'DIUM.—Fruit a many-seeded, one-celled pod. Petals four. Nectaries four. Calyx fugacious.

E. *alpínum.*—Leaves decompound. Flowers panicled, reddish, with yellow nectaries.

"Bingley woods, Yorkshire. Carrock Fell and Skiddaw, Cumberland." A doubtful native.

CO'RNUS (Dogwood).—See *Caprifoliáceæ*, p. 158.

C. *sanguínea.*—Woods, chiefly on chalk and limestone.

C. *suecica.*—Herbaceous. Branches binate (two together). Florescence a pedunculate umbel, with a four-leaved white petaloid involucre.

Lahmagan, near Invercauld; and Glenbucket, near the Manse—Dr. A. Murray.

PARIETA'RIA (Pellitory). See *Urticáceæ*, p. 119.

P. *officinális.*—Walls of old buildings, churches, &c.

ALCHEMI'LLA (Lady's Mantle).—See *Sanguisorbíneæ*, p. 194.

A. *vulgáris.*—Moist pastures, near Oundle, Northamptonshire. Near Tring, Herts—Mr. Wm. Pamplin.

A. *alpína.*—Leaves digitate, serrated, silky and silvery below.

Aberdeenshire, Hills of Forbes—Rev. H. M'Connach, and Mr. Minty.

A. *arvénsis.*—Fields and gravelly soils.

ISNA'RDIA (———).—See *Onagráceæ*, p. 199.

I. *palústris.*—In a pool at Buxstead, Sussex—Mr. Borrer.

Order II.—DYGY'NIA (Two styles).

BUFFO'NIA (———) Order *Alsináceæ.*—Corolla four-petalled. Capsule two-valved, two-seeded.

B. *tenuifólia.*—A doubtful native.

Said to have been found near Boston, about one hundred years ago.

Order III.—TETRAGY'NIA (Four styles).

I'LEX (Holly).—See *Aquifoliáceæ*, p. 141, 142.

I. *aquifólium.*—"Common in hedges and woods, in a light or gravelly soil."

POTAMOGE'TON (Pond Weed).—See *Nayasáceæ*, p. 85, 86.

P. *dénsa*, P. *pectináta*, P. *pusílla*, P. *compréssa* (var. of the former?) and P. *gramínea*, are not rare in the neighbourhood of London, and in the county of Surrey.

P. *acutifólia.*—" Leaves linear, acuminate, with three principal and numerous close parallel intermediate nerves (veins) occupying the whole surface. Spikes ovate, close, equal to the short peduncles in length.

" Rare. Amberley, Henfield, and Lewes, Sussex—Mr. Borrer."

P. *zosteræfólia.*—" Leaves broadly linear, acute, with three principal and numerous parallel nerves, as in *acutifólia.* Spikes on long peduncles, cylindric." " Stem long, compressed. Leaves several inches long." —Dr. Murray.

" Lochs of Roscobie and Forfar"—Mr. G. Don.

P. *críspa,* with varieties, is common.

P. *perfoliáta.*—Fen ditches, Hants, &c.

P. *lúcens,* and P. *heterophy'lla.*—Not uncommon.

P. *prælónga.*—" Leaves oblong, obtuse, rather broad, sessile, or slightly clasping"—Murray. Flower stalks strong, and very long. Nuts (fruit) when mature, with a prominent sharp border, with faint furrows and ribs on each side of it—Idem. Spikes cylindric, many-flowered."

Berwickshire—Dr. R. Thomson. Morayshire. Loch Lee, Moss of Littie, Lochindorb—Mr. W. A. Stables.

P. *lanceoláta.*—Leaves lanceolate, tapering at the base, membranous, with five to seven nerves, and cross veins. Stem slender, much branched; the transverse veins in the upper leaves form a chain like net-work. Spike small, close, upon a short stalk—Dr. Murray.

I have a specimen from Mr. Pamplin, gathered in Anglesea. In the canal at Kittybrewster, Aberdeen—Dr. A. Murray.

P. *rufēscens.*—Not rare.

P. *oblónga.*—" Leaves coriaceous. Nuts (fruit) minute, blunt at the back."

" Ditches near Henfield? Sussex—Mr. D. Turner."

P. *nátans.*—Common everywhere.

RU'PPIA (Pond-Weed, Tassel).—See *Nayasáceæ,* p. 85.

R. *marítima.*—Salt water, ditches, &c.

SAGI'NA (Pearl-wort).—See *Alsináceæ,* p. 170.

S. *procúmbens,* is perennial. On waste places and moist pastures.

S. *apétala* (Annual). Walks in gardens, walls, &c. very common.

S. *marítima.*—Stems erect, spreading, glabrous. Leaves blunt. Petals seldom produced.

Sea coast. " Aberdeen, Old Town, Links between the Brick-works and the sea"—Dr. A. Murray.

MŒ'NCHIA (———).—See *Alsináceæ,* p. 170.

M. *erécta.*—On heaths and commons. Shere Heath, Hampstead, Chisselhurst, &c.

TILLÆ'A (———).—See *Crassuláceæ.*—Calyx three to four, parted. Petals three to four. Fruit three to four capsules, each two-seeded.

T. *muscósa.*—Stems branched and decumbent at the base. Flowers axillary, sessile, mostly three-cleft.

On moist barren heaths in various parts of England. A troublesome weed in gravel walks, in some parts of Norfolk, and near London?

A minute succulent plant, scarcely two inches high, allied to *Sédum,* with small, reddish, opposite, oblong, blunt leaves." Hooker in B. Flora.

RA'DIOLA (Flax-seed).—See *Linacéæ*, p. 173.
R. *millegrána*.—Gravelly and moist places.

Class V.—PENTA'NDRIA (Five stamens).

Order I.—MONGY'NIA (One pistil).

E'CHIUM (Viper's buglos).—See *Boragináceæ*, p. 139.
E. *vulgáre*.—Walls, fields, and waste places.
E. *violáceum*.—"Stem branched, spreading, hairy. Lower leaves oval, oblong, petiolate; upper oblong, cordate, slightly amplexicaule. Stamens scarcely longer than the corolla.
"Plentiful on the sandy ground, St. Hillary, Jersey—Ray. Since found on the same spot by Mr. Trevelyan."
PULMONA'RIA (Lung-wort),—Throat of the corolla open, funnel-shaped. Calyx five-cleft, five-angled.
P. *officinális*.—Radical leaves oval, cordate, petiolate; upper sessile.
Woods in Bedfordshire and Hants. In gardens common.
P. *angustifólia*.—Leaves lanceolate, scarcely spotted.
Woods and thickets Isle of Wight, New Forest; rare.
LITHOSPE'RMUM (Gromwell).—See *Boragináceæ*, p. 138.
L. *officinále* (Common Gromwell).—Dry banks, woods, &c.
L. *arvénse*.—Cornfields.
L. *purpúreo-cæruleum*.—"Darent Wood, and Greenhithe, Kent; Taunton, Somerset."
L. *marítimum*.—Plant procumbent, branchy. Lower leaves oval, very rough, with callous tubercles; upper lanceolate, all fleshy and glaucous. Flowers large, of a very beautiful purplish blue.
Uncommon in England; said to be found only in the North. A plant was gathered in 1826 in the south of England. Not uncommon in Scotland. Bay of Stonehaven.
SYMPHY'TUM (Comfrey)—See *Boragináceæ*, p. 137.
S. *officinále*.—River sides, &c., not rare.
S. *tuberósum*.—Common in Scotland, and rare in England. Wey, between Weybridge and Byfleet. Wimbledon Park—Mr. Wm. Pamplin.
LYCO'PSIS (Buglos Ox-tongue).—See *Boragináceæ*, p. 137.
L. *arvénsis*.—Cornfields, common.
BORA'GO (Borage).—See *Boragináceæ*, p. 137.
B. *officinális*.—On rubbish; scarcely indigenous.
ASPERU'GO (Madwort).—See *Boragináceæ*, p. 137.
A. *procúmbens*.—Waste places in the North—Durham; Dunbar; Edinburgh.
CYNOGLO'SSUM (Hound's-tongue).—See *Boragináceæ*, p. 137.
C. *officinále*.—Roadsides and waste places.
C. *sylváticum*.—Epping Forest. "Carse of Gowrie—Mr. G. Don."
ANCHU'SA (Alkanet).—Corolla funnel-shaped, with a straight tube, with convex, connivent scales. Nuts concave at the base.
A. *officinális*.—Flowers in imbricated, unilateral spikes, with oval bracts and lanceolate leaves.
"Waste-ground, Links, Hartley-pans, Northumberland."
A. *sempervirens*.—Flowers capitate, on axillary peduncles. Leaves oval.
"Devon and Cornwall, certainly wild—Rev. J. S. Tozer."

MYOSO'TIS (Mouse-Ear).—See *Boragináceæ*, p. 138.

M. *palústris*, *cæspitósa*, and *secúnda* (Murray), grow in bogs.

M. *sylvática*.—In woods. M. *arvénsis*, and Var. *intermédia*.—In cornfields, &c.

M. *collína* and *versícolor*.—On heaths, banks (sandy); the latter in moist meadows and dry places.

M. *alpéstris*.—"Calyx deeply cleft, with straight, and a few curved bristles, campanulate, shorter than the slightly spreading pedicels. Limb of corolla flat, longer than the tube. Fruit smooth.

Breadalbane mountains; Schehallion.

ANAGA'LLIS (Pimpernel).—See *Primuláceæ*, p. 141.

A. *arvénsis*.—Rubbish and fields common.

Var. β. *cærúlea*. Chalky cornfields.

A. *tenélla*.—Boggy places.

LYSIMA'CHIA (Loose-strife).—See *Primuláceæ*, p. 141.

L. *vulgáris*.—River sides, &c.; not very common.

L. *némorum*.—In woods.

L. *nummulária*.—Wet meadows, hedges, and banks.

L. *thyrsiflóra*.—Racemes of flowers lateral and pedunculate, yellow, small, and crowded. L. *thyrsiflóra*.—"Differs from L. *vulgáris* in its lateral (not terminal) florescence.

Very rare in England; more common in Scotland. Duddingston Loch. Near Rossdhu, by Loch Lomond."

L. *punctáta*.—"Leaves whorled, fours, petiolate. Flowers whorled, axillary.

Discovered by the late Mr. Nathan Backhouse, in 1803, on the margins of the Skern, north of Darlington. Frequent on the west side of the river, above and below the Railway bridge."

CY'CLAMEN (Sow Bread) (*Primuláceæ*).—Corolla rotate, with reflex segments. Capsule one-celled, pulpy.

C. *hederæfólium*.—Leaves cordate, angular, toothed. Stemless, with nodding white and purple flowers.

"On a bank at Bramfield, Suffolk—D. E. Davy, Esq. Sandhurst Green—Mr. Christy; and Goudhurst, Kent—Mr. Borrer."

PRI'MULA (Primrose).—See *Primuláceæ*, p. 141.

P. *vulgáris*.—Common in woods, &c.

P. *elátior*.—Woods, Selbourne—Mr. William Pamplin. Weston Wood, Albury—Miss Lloyd. Crimplesham—Rev. G. Munford.

P. *véris*.—Common in meadows, &c.

P. *farinósa*.—Leaves glabrous above, hoary below. Flowers small, rosy, umbellate.

Yorkshire, not rare.

P. *scótica*.—"Differs from the preceding (*farinósa*) in its smaller size, stouter habit, globose ovary, and five-pointed stigma.

"Caithness—Discovered by Mr. W. Gibb, of Inverness. Frequent on the coast of Sutherland and in the Orkneys."

HOTTO'NIA (————).—See *Primuláceæ*, p. 141.

H. *palústris*.—Fens, not rare.

MENYA'NTHES (Bog Bean).—See *Gentianáceæ*, pp. 140 141.

M. *trifoliáta*.—Boggy places, not rare.

VILLA'RSIA (————).—See *Gentianáceæ*, p. 141.

V. *nymphæoídes.* — Fens of Cambridge, &c.; Hampton Court—T. Ralph, Esq.

DATU'RA (Thorn Apple).—See *Solanáceæ,* p. 139.

D. *stramónium.*—On rubbish, &c., not indigenous.

HYOSCY'AMUS (Henbane).—See *Solanáceæ,* p. 139.

H. *níger.*—Very abundant in Hunts and Northamptonshire.

SOLA'NUM (Nightshade).—See *Solanáceæ,* p. 139.

S. *dulcamára.*—In hedges. S. *nígrum.*—On rubbish, both common.

A'TROPA (Deadly Nightshade).—See *Solanáceæ,* p. 139.

A. *belladónna.*—Wansford and Peterborough, Northampton, not rare.

VERBA'SCUM (Mullein).—See *Scrophularáceæ,* pp. 127, 128.

V. *thápsus.*—In a sandy soil, on banks, &c., not rare.

V. *lychnites* (White Ditto). — Kent, about Farnborough, Grinstead Green, &c.

V. *thapsifórme,* or *thapsoídes.*—" Kent." Guildford, Surrey.

V. *pulveruléntum.* — " Leaves oval-oblong, subserrated, pulverulent, tomentose on both sides. Stem rounded, panicled."

" Frequent in Norfolk and Suffolk."

V. *nígrum.*—Florescence often panicled.

About Albury and Shere. " Banks and roadsides on a gravelly or chalky soil."

V. *virgátum.* — " Leaves oval, lanceolate, toothed, sessile. Radical leaves downy, somewhat lyrate. Stem branched. Flowers aggregate, partly sessile."

" Rare. Wrexham; Plymouth; Lincoln." A doubtful British species.

V. *blattária.*—" Kent." Shooter's Hill. Doubtful like the preceding.

V. *ferrugíneum.*—Stated to have been found near Walton on Thames, apparently wild, by J. S. Mills, Esq.

ERYTHRÆ'A (Centaury).—See Order *Gentianáceæ,* p. 140.

E. *centaúrium.* — Frequent on dry, especially chalky, pastures. On Shooter's Hill, with white flowers.

E. *pulchélla.*—" Stem branchy. Calyx nearly as long as the tube of the corolla.

" Sandy sea-shores."

E. *littorális.*—" Flowers sessile, capitate, panicled. Calyx deeply cleft, as long as the tube.

Sandy coast of Northumberland, &c."

E. *latifólia.* — " Stem three-forked. Flowers in dense forked tufts. Segments of the corolla lanceolate. Lower leaves broadly elliptical, with five to seven ribs.

Coast of Lancashire; near Holyhead.

CONVO'LVULUS (Bindweed). See *Convolvuláceæ,* p. 142.

C. *arvénsis.*—Cornfields, hedges, &c. C. *sépium.*—Woods and hedges.

C. *soldanélla.*—Sandy sea shores, not rare.

POLEMO'NIUM (Jacob's Ladder).—Calyx five-cleft. Corolla rotate, five-lobed, bearing the five stamens in the middle of the tube, alternately with its segments. Ovary three-celled. Capsule three-valved.

P. *cærúleum.*—(Blue Ditto).—Leaves pinnate, glabrous. Leaflets oblong, lanceolate,

Rare, near Castleton, Derbyshire. " Queensferry, Arniston and Delvine woods, Scotland."

AZA'LEA.—" Calyx five-parted. Corolla shortly campanulate, with the stamens inserted at the base. Fruit capsular, two to three celled, two to three valved. Seeds attached to a central receptacle (placenta).

A. *procúmbens* (Trailing Azalea).—" On most of the Scottish Highland mountains."

VI'NCA (Periwinkle).—See *Apocynáceæ*, p. 140.

V. *májor*.—Copses and hedges, scarcely wild. Beckenham, Kent. About Croydon. Hendon, Middlesex.

V. *minor*.—Banks, hedges and woods, truly wild about Colchester, Hendon, Kingsbury, Middlesex.

Variety with variegated white, pink, and blue, and semi-double flowers, at Theydon Bois, Epping Forest.

SA'MOLUS (Brookweed).—See *Primuláceæ*, p. 141.

S. *valerándi*.—Boggy places, not common near London. Deptford marshes?

JASI'ONE (Sheep's Bit, or, Scabious).—See *Campanuláceæ*, p. 144.

J. *montána*.—Dry pastures and heaths; Mitcham Common, Bromley, Albury and Shere, &c.

LOBE'LIA (————).—" Corolla irregular, two-lipped, cleft on the upper side. Anthers united. Stigma hairy. Capsule two to three-celled."

L. *úrens*.—" Stem erect. Leaves toothed, nearly glabrous. Radical leaves oboval, petiolate. Upper lanceolate, sessile. Raceme terminal, bracteate. Calyx rough.

" Heathy ground, very rare; near Axminster, and Ollery St. Mary, Devonshire."

L. *dortmánna*.—" Leaves radical, subcylindric, of two parallel tubes. Stem almost leafless.

" Lakes in north of England, Scotland, and Ireland, especially in the mountainous parts, frequent."

PHYTEU'MA (Rampion).—See *Campanuláceæ*, p. 145.

P. *orbiculáre* (Round-Headed ditto).—Downs of Surrey, Kent, &c.

P. *spicátum*.—Spike oblong, cylindric, two to four inches.

Mayfield and Waldron, Sussex—Mr. Borrer. Hooker's Flora.

CAMPA'NULA (Bell Flower).—See *Campanuláceæ*, pp. 144, 145.

C. *rotundifólia*.—Common on banks, &c.

C. *pátula*.—Similar in habit to C. *rotundifólia*, much taller and a more branching florescence.

In the south-eastern counties, rare.

C. *rapúnculus*.—" Kent, Surrey, &c., in a gravelly soil."

C. *persicifólia*.—" Stem rounded, few-flowered; radical leaves oboval, petiolate, crenated. Cauline linear, lanceolate, subserrate, sessile. Calyx segments entire. Corolla spreading. Plant glabrous.

" Woods, near Cullen, Scotland, apparently indigenous—G. Don."

C. *latifólia*.—" Shady woods, Norfolk, Suffolk, and Bedfordshire, rare." West Winch, rare—The Rev. G. Munford.

C. *rapunculoides*.—Stem slightly branched. Leaves cordate, lanceolate, scabrous, crenated. Flowers solitary, unilateral, drooping, axillary; segments of the calyx reflexed.

" Plentifully in cornfields, two miles north-west of Kirkaldy—The late Alexander Chalmers, Esq." " Between Wentbridge and Darlington, Yorkshire—Mr. James Backhouse."

C. *trachélium*.—" Woods, rare in Scotland."

C. *glomeráta*.—Dry chalky pastures. In woods the florescence is frequently a long leafy raceme.

C. *hederácea.*—High Beech, Epping; near Keston, Kent, and Waterdown Forest, Tunbridge Wells—Mr. William Pamplin.

C. *hy'brida.*—Chalky cornfields.

LONICE'RA (Honeysuckle).—See *Caprifoliáceæ*, p. 158.

L. *caprifólium.*—Upper leaves connate (attached by their bases). Rare, woods, Oxon, and Cambridge.

L. *periclу'menum.*—Common.

L. *xylósteum.*—Houghton Bridge, four miles from Arundel, Sussex.

RHA'MNUS (Buckthorn).—See *Rhamnáceæ*, p. 167.

R. *cathárticus.*—Not rare in Surrey.

R. *frángula.*—Woods, common.

EUO'NYMUS (Spindle Tree).—See *Celastráceæ*, p. 167.

E. *europæ'us.*—Woods and hedges.

VI'OLA (Violet).—See *Violáceæ*, p. 165.

V. *hirta* (Rough Ditto).—Common on chalk. V. *odoráta* (Sweet Ditto). —Banks, &c.

V. *palústris* (Marsh Ditto).—Not common, Ashdown Forest; Tilgate Forest; Leith Hill.

V. *canina* and Var. *flavicórnis* (Dog's Violet).—Common on heaths.

V. *lactéa.*—Rare, Cornwall, &c.

V. *tricólor*, with varieties, *arvénsis*, and Forster's Tunbridge plant V. *Rothomagénsis*, not rare in cornfields, &c.

RI'BES (Currant).—See *Grossuláceæ*, p. 198.

R. *rúbrum* (Red Ditto).—Alpine woods.

R. *spicátum.*—Flowers and fruit on erect spikes. Bracts shorter than the flower.

"Richmond, Yorkshire."

R. *alpínum.*—Flowers and fruit in erect clusters. Bracts longer than the flower,

"Bradford and Rippon, Yorkshire."

R. *petræ'um.*—Fruit pendulous.

"Near Eggleston and Conscliffe, Durham."

R. *grossulária* (Gooseberry).—Hedges, in several parts.

HE'DERA (Ivy).—See *Araliáceæ*, p. 198.

H. *hélix* abounds everywhere.

GLAUX (Sea Milkwort).—See *Appendix*.

G. *marítima.*—Abundant by the sea.

ILLE'CEBRUM (Knot-Grass).—See *Illecebráceæ.*—Perianth single, consisting of five cartilaginous pieces. Ovary one-seeded.

I. *verticíllatum.*—Stem procumbent. Flowers whorled. Leaves oval, glabrous. Perianth white, awned.

"Marshy and boggy ground, Devonshire and Cornwall."

THE'SIUM (Bastard Toad Flax).—See *Santaláceæ*, p. 125.

T. *linophy'llum.*—Chalky pastures, not rare.

Order II.—DIGY'NIA (Two styles).

SWE'RTIA (————).—*Gentianáceæ.*—Corolla rotate, with nectariferous pores at the base of the segments. Capsule one-celled.

S. *perénnis.*—Root leaves oval. Corolla five-cleft, of a dull, ashy, purple colour. Stem glabrous, about a foot high.

A doubtful native.

GENTIA'NA (Gentian).—See *Gentianáceæ*, p. 140.

G. *acaúlis.*—Flowers solitary, as long as the four-angled stem.
Gardens. Once found in Wales.

G. *pneumonánthe* (Marsh Gentian).—Sussex, uncommon.

G. *vérna.*—Flower solitary, with five large and five smaller segments.
I had a plant, from near York, sent by T. Ralph, Esq.

G. *nivális.*—Stem branched, with single flowers on each.
Glen Isla, Clova—Drs. Wight and Graham.

G. *amarélla.*—Chalky pastures, not rare.

G. *campéstris.*—Corolla and calyx four-cleft. Stem branchy, bearing numerous flowers.
Plentiful in Scotland, near the sea.

CU'SCUTA (Dodder).—See *Convolvuláceæ*, p. 142.

C. *europæ'a.*—Maidenhead, Berks; on Lucern—Mr. Pamplin.

C. *epithy'mum.*—On furze and heath, Hayes Common, Weybridge, &c.

SA'LSOLA (Glass-wort).—See *Chenopodiáceæ*, p. 123.

S. *káli.*—Common on sea-shores.

" S. *fructicósa* (*Chenopódium frúticosum*).—Coast of Norfolk, especially at Cley. Suffolk, Dorset, Devon, and Cornwall, rare."

CHENOPO'DIUM (Goose-foot).—See *Chenopodiáceæ*, pp. 121, 122.

Ch. *marit.* and Ch. *botryodes* grow by the sea; "the latter at Yarmouth and Lowestoft"—Sir J. E. Smith.

Ch. *bónus henrícus*—In waste grassy places, not common. The rest of the species grow in fields, under walls, on rubbish, and manure heaps.

Ch. *hybridum, ficifólium,* and *glaúcum,* are the least common.

BE'TA (Beet).—See *Chenopodiáceæ*, p. 123.

B. *marítima.*—Near the sea, in a muddy soil.

HERNIA'RIA (Rupture-Wort).—See *Illecebráceæ*, p. 160.

H. *glábra.*—Found in Cornwall, about the Lizard.

H. *hirsúta.*—Found about Colney-Hatch and Barnet, in Hudson's time. Hooker adds, "probably not wild."
These two are united by Sprengel, under the name of H. *vulgáris.*

U'LMUS (Elm).—See *Ulmáceæ*, p. 118.

U. *campéstris* and *suberósa.*—Common.

U. *májor* and *glábra.*—Grow in the neighbourhood of London—Smith and Hooker.

ERY'NGIUM.—(Sea Holly). See *Umbelliferáceæ.* (Umbelliferæ). p. 194.

E. *marítimum.*—Frequent on sea-shores.

E. *campéstre.*—Radical leaves sub-ternate, cauline pinnatifid, amplexicaule. Involucre lanceolate, spinous. Scales of the receptacle undivided.
Very rare. Plymouth—Mr. Banks. Daventry—Rev. Mr. Wood.

HYDROCO'TYLE (White-Rot). See *Umbelliferáceæ*, p. 194.

H. *vulgáris.*—Common about lakes, and in marshy parts.

SANI'CULA (Sanicle).—See *Umbelliferáceæ*, p. 194.

S. *europæ'a.*—Woods.

HERA'CLEUM (Cow Parsnip).—See *Umbelliferáceæ*, pp. 194, 195.

H. *sphondy'lium.*—Hedges, woods, &c.

ŒNA'NTHE (Water-drop Wort).—See *Umbelliferáceæ*, pp. 196, 197.

Œ. *fistulósa* and *phellándria.*—Common in pools and ditches, &c. *Crocáta* about river banks.

E. *pimpinelloídes.*—In salt marshes.

A. *peucedanifólia.*—In ditches, but not common. In the fenny counties.

ECHINO'PHORA (Prickly Samphire).—Fruit immersed in the involucel. Florets of the ray abortive; of the disk fertile.

E. *spinósa.*—Leaflets entire, or trifid, subulate, and spiny. Leaves unequally pinnate. Stem branchy.

"Found many years ago in Lancashire and Kent; but now, I fear, lost as a native of Britain"—Hooker.

CA'UCALIS (Bur Parsley).—See *Appendix.*

C. *latifólia.*—Umbels trifid, with an involucre. Umbelluls five-fruited. Leaves pinnate and serrated.

Fields in a chalky soil, rare. Abundant in Cambridge.

C. *daucóides.*—No involucre. Involucel of three small bracts. Partial umbels few flowered. Leaves bipinnatifid or tripinnatifid.

Chalky cornfields, Northamptonshire, &c.

DAU'CUS (Carrot).—See *Umbelliferáceæ,* p. 196.

D. *carota.*—Common about the borders of fields, especially in a chalky soil.

C. *marítimus* "is smaller than D. *caróta,* with broader and more fleshy leaves, but I fear scarcely permanently distinct"—(Hooker).

Coast of Kent, Cornwall; Anglesea.

TORDY'LIUM (Hart-Wort).—Ray florets fertile. "Carpels with very slender ridges, three of which are dorsal, and equi-distant; the two lateral ones near the thickened margin. Involucres and involucels of many leaves."

T. *máximum.*—"Involucre linear, shorter than the umbel. Fruit rough, with appressed hairs.

"Rare; in waste ground about London, Oxford, and Eton."—(Hooker).

T. *officinále.*—Involucre setaceous, as long as the umbel. Fruit glabrous.

Near London? Ray and Petiver—(Hooker).

CORIA'NDRUM.—Fruit globular. Involucel dimidiate (half round the umbel). Ray florets abortive.

C. *sativum.*—"Lower leaves pinnate, with cuneate leaflets; upper leaves triternate, with linear leaflets."

"Essex, in places where it had been cultivated."

ATHAMA'NTA (Meadow Saxifrage) (Seseli).—Fruit convex, striated. Petals cordate. Florets fertile.

A. *libanótis.* — Leaves flat, bipinnate. Umbel hemispheric. Fruit rough. Flowers white, with violet styles.

Chalky pastures; very rare. Gogmagog Hills, Cambridge (Ray) —Rev. Prof. Henslow. Between St. Albans and Stoney Stratford (Hudson).

LIGU'STICUM.—Calyx toothed. Petals involute. Florets fertile. Bracts of the involucre membranous.

L. *scóticum.*—Leaves biternate, with broad leaflets. Fruit with membranous ribs.

"Rocky sea-coasts on the North of England and Scotland, frequent."

L. *cornubiénse.*—Cauline leaves ternate, with lanceolate, entire segments. (*Physospermúm* of Hooker, &c.)

In Cornwall, about Bodmin, and only there—Rev. J. S. Tozer.

ANGE'LICA (————).—See *Umbelliferáceæ,* p. 196.

A. *archangélica.*—Rare. A. *sylvéstris.*—Common. The former near Birmnigham. On the Thames side. Near Dorking. They both grow in moist parts, woods, and hedges—(Hooker).

PEU'CEDANUM (Hogs' Fennel).—Fruit compressed, winged. Petals inflected at the point.

P. *officinále* (Sea ditto).—Leaves three-parted, with linear filiform leaflets. Bracts of the involucre few.

Salt marshes, very rare. Essex coast—Mr. Jonathan Grubb.

P. *palústre* (Marsh ditto).—Leaves ternate, with pinnatifid leaflets. Bracts of involucre lanceolate, persisting.

Norwich. Isle of Ely. A very scarce plant.

ÆTHU'SA (Fool's Parsley).—See *Umbelliferáceæ*, p. 197.

Æ. *cynápium.*—A common weed in gardens and fields.

CHÆROPHY'LLUM (Cow Parsley).—See *Umbelliferáceæ*, p. 197.

Ch. *temuléntum.*—Common in woods and hedges.

Ch. *sylvéstre* (*Anthriscus sylvéstris*) of Koch and Hooker.

It is very common under hedges.

Ch. *cerefólium*, is supposed to be an outcast from gardens.

Ch. *aúreum*, "is distinguished from the other British species, by the peculiarly narrow leaflets on the upper leaves.

"Fields between Arbroath and Montrose, and near Corstorphine, Edinburgh—Mr. G. Don."

Ch. *aromáticum*, "is known by its biternate leaves, with large, undivided leaflets.

"Roadside near Guthrie, leading from Forfar to Arbroath—Mr. G. Don."

SCA'NDIX (Venus' Comb).—See *Umbelliferáceæ*, p. 197.

S. *pécten véneris.*—A common weed in cornfields.

S. *odoráta* (*Myrrhis odoráta*).—Seeds angular, furrowed. Leaves subtripinnate, hairy.

Pastures in mountainous countries, North of England and Lowlands of Scotland. Near houses East of Scotland.

PHELLA'NDRIUM (*Œnánthe phellándria*) Water Hemlock.—See *Œnánthe.*

CICU'TA (Cowbane).—Fruit sub-ovate, sulcate.

C. *virósa.*—Leaves biternate; leaflets lanceolate, serrated.

Lakes and ditches, North of England and Scotland, not common. Scotland, Loch of Forfar—Wm. Christy, Esq. From Mr. Pamplin.

IMPERATO'RIA (Master Wort.)—Florets fertile. Umbel flat. Fruit compressed.

I. *ostrúthium.*—"Leaves biternate, with broad, lobed, incised, and serrated leaflets. Fruit with a very broad margin. No involucre."

"Scotland, in moist pastures."—Hooker.

PASTINA'CA (Parsnep).—See *Umbelliferáceæ*, p. 195.

P. *sativa.*—Common in the borders of chalky fields.

SMY'RNIUM (Alexanders) See *Umbelliferáceæ*, p. 197.

Sm. *olusátrum.*—Waste ground, rivers, &c. Rochester Castle—Mr. Wm. Pamplin. Under hedges in Essex (Mersea).

A'NETHUM (Fennel).—See *Umbelliferáceæ*, p. 195.

A. *fœniculum* (*fœniculum vulgáre*).—Hooker.

"Plentiful on chalky cliffs in England, near the sea, (Smith), and in the neighbourhood of towns and villages in Norfolk and Suffolk, at short distances from the coast."—(Hooker).

PIMPINE'LLA (Burnet Saxifrage).—See *Umbelliferáceæ*, p. 195.

P. *saxífraga*.—In meadows, not rare.

P. *mágna*.—Near Brasted, &c. Kent—Mr. William Pamplin.

P. *dioica* (*Trínia glabérrima*), Hooker—(Glabrous Honewort).—Leaflets linear. Partial umbels panicled. Flowers diœcious, glaucous, six inches high.

"Limestone, rare. Near Bristol, on St. Vincent's Rocks. Whorle Hill, Somersetshire—Mr. Christy."—Hooker.

PETROSELI'NUM (Parsley).—"Petals roundish, with an incurved point. Fruit ovate, lateral, contracted. Carpels with five filiform equal ridges. Involucre of few; involucel of many leaves."

P. *satívum*.—"Leaves shining. Lower leaflets oval, cuneate, trifid and toothed; upper lanceolate, nearly entire. Involucel of filiform bracts."

About Greenwich, an outcast from gardens.

"Frequent on old walls, south-west of England, naturalized"—Hooker.

P. *ségetum*.—See *Sison ségetum*, p. 195.—Chalky fields, not rare.

HELOSCIA'DIUM (Marshwort).—See *Sium* (*Umbelliferaceæ*), p. 195.

H. *nodiflórum*, *repéns*, and *inundátum*.—In watery places; the last in pools that are dried up in summer.

SI'SON (Bastard Stone Parsley).—See *Umbelliferáceæ*, 195.

S. *amómum*.—Not rare, under moist hedges.

CA'RUM (Caraway).—See *Umbelliferáceæ*, p. 195.

C. *cárui*.—In Essex, near Colchester, apparently an outcast.

"Meadows and pastures in several parts of England and Scotland"—Hooker. Marshes, Lynn—The Rev. G. Munford.

C. *verticillátum*.—Leaflets all capillary.

Unknown in England. "In Wales; Killarney, Ireland. Moist hilly pastures west of Scotland"—Hooker.

BU'NIUM (Earth Nut).—See *Umbelliferáceæ*, p. 196.

B. *flexuósum*.—Pastures and woods, common.

SI'UM (Water Parsnip).—See *Umbelliferáceæ*, p. 195.

S. *latifólium* and S. *angustifólium*.—Common in watery places.

BUPLEU'RUM (Hare's Ear).—See *Umbelliferáceæ*, p. 194.

B. *odontítes*.—"Involucre and involucel four to five-leaved, each with lanceolate bracts, longer than the umbels. Leaves linear, three-nerved.

"Rocks, Torquay—Rev. J. S. Tozer."

B. *rotundifólium*.—Chalky fields. "Swaffham, Cambridgeshire—Rev. P. Henslow. Streatly, Berkshire—J. S. Mills, Esq.; Buckinghamshire.

B. *tenuissimum*.—"Stem much branched. Leaves linear. Umbels lateral, very minute, few-flowered, shorter (usually) than the setaceous involucres."

"Salt marshes, south and east coasts of England."

B. *falcátum*.—"Radical leaves oboval, on long stalks; upper sessile, linear, lanceolate. Involucel of five lanceolate leaves as long as the flowers. Involucre five-leaved.

"Norton heath, near Ongar, Essex—Mr. T. Corder."

SILA'US (Pepper Saxifrage).—See *Cnídium*.

S. *praténsis*.—Meadows, not rare.

ME'UM (Spignel).—"Petals elliptic, points incurved. Fruit roundish, tapering, (subterete). Carpels with five prominent, acutely carinated equal ridges. Involucel of many bracts."

M. *athamánticum.*—"All the leaflets multipartite. Segments bristle-shaped.

" Dry Alpine pastures. North of England and Scotland."

CRI'THMUM (Samphire).—" Petals elliptic, entire, involute. Carpels spongy, with five elevated sharp, somewhat winged, ridges. Involucre and involucel of many leaves.

C. *maritimum.*—" Leaflets lanceolate, fleshy. Bracts of involucre oval.

" Rocks by the sea-side. Rare in Scotland." Shakspeare's Cliff, Dover.

CO'NIUM (Hemlock).—See *Umbelliferáceæ*, p. 197.

C. *maculátum.*—Hedges, not rare.

ANTHRI'SCUS (Beaked Parsley).—See *Umbelliferáceæ*, p. 197.

A. *sylvéstris.*—See CHÆROPHY'LLUM *sylvéstre*, A. *cerefólium*, Ch. *satívum.*

A. *vulgáris.*—Waste places and hedges, near towns, &c., not rare.

TORI'LIS (Hedge Parsley).—See *Umbelliferáceæ*, p. 196.

T. *anthríscus.*—Hedges. T. *inféstu.*—Fields. T. *nodósa.*—Waste places.

A'PIUM (Celery).—See *Umbelliferáceæ*, p. 197.

A. *graveólens.*—Marshy places, near the sea.

ÆGOPO'DIUM (Gout-Weed).—See *Umbelliferáceæ*, p. 198.

Æ. *podagrária.*—Gardens, orchards, &c., common.

Order III.—TRIGY'NIA.—(Three styles.)

VIBU'RNUM (Guelder Rose).—See *Caprifoliáceæ*, p. 158.

V. *lantána.*—Woods and hedges, chiefly in a chalk or limestone soil.

V. *ópulus.*—Moist woods, not uncommon.

SAMBU'CUS (Elder).—See *Caprifoliáceæ*, p. 158.

S. *ébulus* (Danewort or Dwarf Elder).—Waysides and waste places.

S. *nígra.*—Common.

STAPHYLE'A (Bladder Nut).—Corolla pentapetalous. Fruit capsular, inflated.

S. *pinnáta.*—Pinnate leaves. Flowers white, racemous. Binary styles and capsules.

" Yorkshire, about Pontefract. Ashford, Kent."

TA'MARIX (Tamarisk).—See *Tamaricáceæ*, p. 160.

T. *gállica.*—Rocks, cliffs, and sandy shores, by the sea. About Hurst Castle and Hastings.

CORRIGI'OLA (Strap-Wort).—See *Illecebráceæ.*—Corolla pentapetalous. Seed one, triangular.

C. *littorális.* Prostrate, glaucous. " Stem leafy."

South-west of England, Star point, Devon, and Helston, Cornwall—Hooker.

Order IV.—TETRAGY'NIA (Four styles.)

PARNA'SSIA (Grass of Parnassus).—See *Saxifragináceæ.*—Corolla furnished with globuliferous hairs (columns). Capsule four-valved.

P. *palústris.*—Flowers large, white, solitary. Leaves cordate.

" Bogs and wet places, especially in the North." Holme Fen, Hunts. Roydon Fen, rare.—The Rev. G. Munford.

Order V.—PENTAGY'NIA (Five styles).

STA'TICE (*Armería*, Decandolle).—See *Plumbagináceæ*, p. 126.

S. *arméria.*—Muddy sea-shores, common.

S. *plantagínea.*—Leaves linear, lanceolate, three to five nerved. Scape and florescence as in S. *arméria.* "Bracts of the involucre cuspidate. Calyx with long awns."

On the West side of the Island of Jersey—W. C. Trevelyan, Esq.

S. *limónium.*—Common on muddy sea-shores.

S. *spathuláta.*—See S. *cordáta.*—"Coasts of Kent, Essex, Cumberland, &c."

S. *reticuláta.*—Much smaller than either of the two last, with very short leaves.

Rare. Cley and Wisbeach.

LI'NUM (Flax).—See *Lináceæ*, p. 173.

L. *usitatissimum.*—Cornfields and roadsides.

L. *perénne.*—"Leaves linear, acute; calyx leaves (sepals) oboval, obtuse, obscurely five-ribbed, glabrous. Stems numerous from the same root.

Chalky hills, Cambridgeshire. Hinton—Rev. Prof. Henslow. Northamptonshire, Norfolk, Suffolk, and Westmoreland—Rev. G. R. Leathes."

L. *angustifólia.*—Kent, Sussex, Norfolk, &c.

L. *cathárticum.*—Pastures, common.

SIBBA'LDIA.—See *Rosáceæ.* Sub-Order, *Potentillineæ.*—Calyx in ten alternately large and small segments. Petals five, inserted on the calyx. Capsules five, indehiscent, invested with the calyx, one-seeded.

S. *procúmbens.*—Leaves ternate, with cuneate leaflets.

Summits of the Highland mountains, Scotland, abundant.

Order VI —HEXAGY'NIA.—(Six styles).

DRO'SERA (Sun-Dew).—See *Droseráceæ*, p. 161.

D. *rotundifólia.*—Heathy bogs, not rare. D. *longifólia.*—Moist heathy ground. Castle Rising, Heath—The Rev. G. Munford,

"More common in the South than in the North."—Hooker.

D. *anglíca.*—"The seed of D. *anglíca* has a very loose, reticulated, smooth coat. In D. *longifólia* the seed-coat is firmly adherent, and rough, or papillose"—(Mr. Wilson in Hooker's British Flora).

Order VI.—POLYGY'NIA—(Many styles).

MYOSU'RUS (Mouse-Tail).—See *Ranunculáceæ.*

M. *mínimus.*—Cornfields, not common. Hardwick, rare—The Rev. G. Munford.

Class VI.—HEXA'NDRIA (Six stamens).

Order I.—MONOGY'NIA.—(One style).

BE'RBERIS (Barberry).—See *Berberáceæ*, p. 186.

B. *vulgáris.*—Woods and hedges.

FRANKE'NIA (Sea Heath).—Calyx monosepalous. Corolla of six petals. Capsule one-celled, three-valved. Valves seminiferous at their margins.

F. *læ'vis.*—Leaves glabrous, linear and ciliated at the base.

Isle of Sheppy, Kent—The Rev. Professor Henslow. East coast of England.

F. *pulverulénta.*—" Leaves oboval, retuse, glabrous above, downy and pulverulent below, petiole ciliated.

" Found in the time of Dillenius and Hudson, on the Sussex shore."

PE'PLIS (Purslane).—See *Lythráceæ.*

P. *pórtula.*—Edges of ponds, not rare.

LEUCO'JUM (Snowflake) Monocotyled.—See *Amaryllláceæ.*—Perianth campanulate, superior (above the ovary) of six equal pieces, a little thickened at the point. Spathaceous.

L. *æstivum.*—Spathe many-flowered. Style club-shaped.

Moist meadows. Thames, below Greenwich. "In Suffolk, Berkshire, Westmoreland, &c."

GALA'NTHUS (Snowdrop).—See *Amaryllláceæ*, p. 109.

G. *nivális.*—Woods. Orchards in many places. Ruffet woods, Banstead, Surrey—Mr. Turner, Jun. Between Guildford and Stoke. Woods about Pepperharrow, &c.

NARCI'SSUS (Daffodil).—See *Amaryllláceæ*, p. 109.

N. *pseudo-narcissus.*—Orchards, &c.

N. *poéticus* and *biflórus.*—Shorne, Kent. Doubtful if any of this genus, or of the two preceding, be truly wild in this country.

CONVALLA'RIA (Lily of the Valley, or Solomon's Seal).—See *Liliáceæ*, p. 106.

C. *majális.*—Woods and copses, Colchester. Bromley, Kent. Guildford. Croydon. Formerly at Hampstead. Woolferton Wood—The Rev. G. Munford.

C. *verticilláta.*—See *Polygonátum.*—Leaves lanceolate, whorled. Flowers cylindric.

" Very rare. Woods and glens in Scotland. Den of Rechip, four miles N.E. of Dunkeld—Mr. A. Bruce."

C. *multiflóra.*—Not rare in woods in England and the South of Scotland; also, at Kingussie, near Aberdeen—Mrs. Boswell.

C. *polygonátum.*—Leaves oval, elliptic, alternate, half embracing the angular stem. Peduncles mostly single-flowered. Flowers cylindric. Filaments glabrous. Style straight.

Very rare. Woods in Kent, Somersetshire, and Yorkshire.

ALLI'UM (Leek Onion Chives).—See *Liliáceæ*, p. 106.

A. *ampelopråsum.*— " Umbels globose. Leaves linear, keeled, acuminate, three alternate stamens, deeply three-cleft.

" Rare. On Holmes Island in the Severn—Ray."

A. *arenárium.*—" Umbels bulbiferous. Leaves linear, with cylindric sheaths.

Mountainous woods and fields in sandy soil. Chiefly in the North of England, Perthshire and Angus-shire."

A. *carinátum.*—S.E. coast of England. Banks of the Isla, Scotland.

A. *oleráceum.*—" Umbel bulbiferous, lax. Leaves grooved above. Stamens simple. Spathe leaves, with long points.

" Borders of fields in Essex. About Bristol. In Norfolk, Westmoreland, and Yorkshire. St. David's, Scotland."

A. *vineále.*—Cornfields and waste ground. Not common.

A. *ursinum.*—Moist woods and banks. Not rare.

A. *schœnoprásum* (Chives).—" Leaves round, subulate, fistulous. Umbel close.

" Meadows and pastures, rare. Westmoreland, Berwickshire, &c."

GA'GEA (———).—See *Liliáceæ.*—Perianth of six pieces, connivent below, spreading above. Filaments not dilated at the base, as in *Ornithógalum.*

G. *lútea.*—"Radical leaves one to two, linear, lanceolate, longer than the angular scape. Umbel simple, with linear bracts longer than itself. Segments of the perianth obtuse.

"Woods and pastures in several parts of England, and Lowlands of Scotland."

ORNITHO'GALUM (Star of Bethlehem).—See *Liliáceæ,* p. 105, 106.

Or. *pyrenáicum.*—"Florescence, an elongated raceme, with spreading pedicels."

Rare. About Send, near Ripley, Surrey. "Pastures in Sussex, Bedfordshire, Somersetshire."

Or. *umbellátum.*—"Pastures in various parts—scarcely wild."

Or. *nútans.*—Flowers pendulous, unilateral, filaments dilated, cloven alternately, longer, and with deeper lobes.

Fields and orchards. Derbyshire, Suffolk, Bedfordshire, and Nottinghamshire, (apparently naturalized).

SCI'LLA (Squill).—See *Liliáceæ,* p. 105.

S. *vérna.*—"Bulb coated. Florescence in a racemous, hemispherical, few-flowered corymb. Bracts lanceolate, obtuse. Leaves linear, channelled."

"Common on the North and West coasts of Britain. Frequent in Orkney and Shetland."

S. *bifólia.*—"Bulb coated. Raceme lax, sub-corymbous. Leaves lanceolate, mostly two.

"A dubious native. It was received from the West of England, by Mr. Sims of Norwich"—Hooker.

S. *autumnális.*—"Raceme scarcely corymbous, without bracts. Pedicels and stamens about as long as the perianth. Leaves linear, several."

"Dry pastures and rocks in Cornwall, and near Bristol. Flag-post Hill, Torquay—Rev. J. S. Tozer."

HYACI'NTHUS (Hyacinth).—See *Liliáceæ,* p. 105.

H. *nonscríptus* (Harebell).—Common in woods, often with a white flower.

MUSCA'RI (Grape Hyacinth).—See *Liliáceæ,* p. 105.

M. *racemósum.*—"Grassy fields, and among ruins; scarcely indigenous."

ANTHE'RICUM (Spiderwort). — See *Liliáceæ.* — Stamens filiform, mostly bearded. Capsule roundish, three-celled, with angular seeds.

A. *serotinum.* — Leaves semi-cylindric, cauline dilated at their base. Flowers mostly solitary.

Rare. Snowdon, Crib y Ddescil, near Llanberis; and Cwm Idwel, Carnarvonshire.

ASPA'RAGUS (———).—See *Liliáceæ,* p. 107.

A. *officinális.*—"South and South-West coasts of England. Links near Gosford, Scotland."

NARTHE'CIUM (Bog Asphodel).—See *Liliáceæ,* p. 106.

N. *ossífragum.*—Wet places in moors, common.

FRITILLA'RIA (Fritillary).—See *Liliáceæ,* p. 105.

F. *meleágris.*—"Meadows and pastures in the East and South of England."

A variety with white flowers.

TULI'PA.—Perianth campanulate. Stigma sessile, three-lobed. Capsule three-angled, with flat seeds.

T. *sylvéstris.*—" Scape one-flowered, somewhat drooping. Stamens hairy at the base. Stigma obtuse.

Chalk pits in Norfolk, Suffolk, Hertfordshire, and Middlesex. Near Brechin, Scotland."

A'CORUS (Sweet Sedge).—See *Typhâceæ*, p. 87.

A. *cálamus.*—" Abundant in Norfolk and Suffolk, in rivers and ditches."

JU'NCUS (Rush).—See *Juncáceæ*, p. 103.

J. *glaúcus, effúsus,* and *glomerátus.*—Common in marshy parts, and by roadsides.

To this section, viz., such as are leafless, and with a lateral, spreading panicle, belong J. *bálticus,* which differs from the three preceding common species, in its erect panicle; and J. *filifórmis,* which is known by its filiform scape, and simple panicle.

J. *bálticus.*—Found in Scotland, near Dundee; and Cape Wrath. Aberdeenshire—Dr. A. Murray.

J. *filifórmis.*—Found about the stony margins of lakes in Westmoreland, Cumberland, and Lancashire. On Ben Lawers, and several parts of Scotland—Mr. G. Don.

J. *marítimus* and *acútus* are similar to the preceding, in having leafless scapes, but are distinguished by having the florescence terminal, and the florets aggregate.

J. *marítimus* has clusters of four to eight florets.

J. *ácutus.*—Two to four florets.

The former is found in salt marshes, but not frequent. St. Andrews, coast of Ayrshire.

J. *ácutus.*—Found chiefly on the South and West of England.

" This plant is larger than the last, especially the capsules, which are of considerable size, much protruded, rich, brown, and

J. *acutiflórus, lampocárpus, obtusiflórus,* and *uliginósus,* are common and distinguished from all the preceding *Júnci,* by their leafy culms and jointed leaves.

The next section has leafy stems. Leaves not distinctly jointed.

J. *compréssus,* and J. *bufónius,* are common.

J. *castáneus.*—Clusters of florets generally single, sessile, or pedunculate, shorter than the bract. Capsules twice as long as the perianth.

Rare. " Breadalbane mountains."

J. *trífidus.*—Heads of about three terminal flowers, subtended by two setaceous bracts, like the solitary stem leaf.

" Scotland—Highland mountains."

J. *ténuis.*—One of the rarest of British rushes. On the mountains of Clova —D. Don, Esq. It is distinguished from the next (*bufónius*) by " its spherical capsules," &c.

J. *bufónius.*—Common in watery places.

The last section of British Rushes consists of such as have only radical leaves.

J. *squarrósus.*—Common on moors and heaths.

J. *capitátus.*—Heads of flowers sessile, terminal, shorter than the bracts. " Distinguished by the setaceous inclined bract, with its sheathy membranous base."

" Found by Mr. Hudson, in Jersey."

J. *biglúmis* (Two-flowered Rush).—Rare. "Breadalbane mountains."

J. *triglúmis* (Three-flowered).—Boggy places, north of England, and Highlands of Scotland.

LU'ZULA (Wood-Rush).—See *Juncáceæ*, p. 104.

L. *sylvática*.—Woods and "mountainous places," not rare.

L. *pilósa*.—Woods, common.

L. *campéstris*.—Pastures, frequent, one of the earliest in flower of this family, being frequently observed in March.

L. *arcuáta*.—Panicle subumbellate, of three to five-flowered heads, with long drooping peduncles. Bracts membranous, fringed.
"Cairngorum, on the summit."

L. *spicáta*.—Known by its spicate florescence.
"Mountains, north of England and Scotland."

Order II.—DIGY'NIA.—(Two styles.)

OXY'RIA (Mountain Sorrel).—See *Polygonáceæ*.—Perianth four pieces. Nut triquetrous, with a broad margin.

O. *renifórmis*.—"Alpine places in England, Wales, and Scotland."

Order III.—TRIGY'NIA.—(Three styles.)

RU'MEX (Dock and Sorrel).—See *Polygonáceæ*, p. 124.

R. *hydrolápathum*.—Ditches and rivers, not rare.

R. *aquáticus*—"Comes, indeed, very near *Críspus* (See R. *críspus*), but the enlarged petals (inner pieces of the perianth) are quite destitute of grains or tubercles."
Near Ayr—Mr. Goldie.

R. *cordifólius* (Alpinus).—Leaves broadly cordate, large, obtuse.

In reference to this species, which is well distinguished by its leaves, Sir William J. Hooker observes, in British Flora—"This most distinct species of *Rúmex* has been found both by the Rev. Mr. Berkeley and myself, in the Scotch Highlands, and far removed from any place where it is at all likely to have been cultivated, for I am aware that its root was formerly employed in lieu of Rhubarb"—British Flora, p. 170.

R. *sanguíneus* or *víridis*, and R. *púlcher*, are not very common; they grow in woods, pastures, and roadsides.

R. *críspus*, *pruténsis*, *acútus*, and *obtusifólius*, are common.

R. *palústris* grows in marshy places, and R. *marítimus* marshes near the sea. Sir J. E. Smith considers that it is distinct from *palústris*, by the form of the petals (pieces of the perianth), and the number, shape, length, and situation of the teeth which border them.

The two Sorrels, R. *acetósa* and R. *acetosélla*, are common every where in meadows and pastures.

TOFIELDIA.—Perianth six-parted, single. Involucre three-parted. Capsule three to six cells, united at the base, with many seeds.

T. *palústris* (Scottish Asphodel). Florescence in an ovate spike. Stem filiform, almost leafless. Flowers small, whitish.
Mountainous bogs. England, Scotland, and Ireland.

SCHEUCHZE'RIA (————).—See *Juncagináceæ*.—Perianth of six pieces, coloured. Capsules three, inflated, two-valved, one to two-seeded.

S. *palústris.*—In a marsh, at Lakeby Car, near Boroughbridge—Discovered by the Rev. James Dalton. Methven, Perth—Mr. Duff.

TRIGLO'CHIN (Arrow-Grass).—See *Juncaginácea*, p. 86.

T. *palústre.*—In marshes inland. T. *maritimum.*—By the sea.

CO'LCHICUM (Meadow Saffron).—See *Colchicáceæ.*—"Perianth tubular, long, spathaceous, campanulate, six-parted, coloured. Capsule three-celled."

C. *autúmnale.*—"Leaves plane, broadly lanceolate, erect.
"Var. with late green abortive flowers.
"In Suffolk, Oxfordshire, &c."

Order IV.—HEXAGY'NIA.—(Six styles.)

ACTINOCA'RPUS (Star-Fruit).—See *Alismáceæ*, p. 107.

A. *damasónium.*—Ditches and pools, not common.

Order V.—POLYGY'NIA.—(Many styles.)

ALI'SMA (Water Plantain).—See *Alismáceæ*, p. 107.

A. *plantágo.*—Lakes, rivers, and pools, common.

A. *nátans.*—"Stem floating and rooting."
"Lakes in North Wales and Cumberland." Blackloch, six miles from Stranraer—Mr. J. Smith."

A. *ranunculoídes.*—Turfy bogs, &c., not common.

CLASS VII.—HEPTA'NDRIA.—(Seven stamens.)

Order I.—MONOGY'NIA.—(One style.)

TRIENTA'LIS (Chickweed Winter-green).—See *Primuláceæ.*—Calyx of seven sepals. Corolla seven-parted. Capsule seven-valved.

T. *européa.*—Leaves oblong, oval, obtuse.
Woods, north of England, but rare. Highlands of Scotland, not rare. In a small wood, near Hilton House, Aberdeen.

CLASS VIII.—OCTA'NDRIA.—(Eight stamens.)

Order I.—MONOGY'NIA.—(One style.)

A'CER (Maple).—See *Aceráceæ*, p. 166.

A. *campéstre.*—Common in hedges, in England; and rare in Scotland.

A. *pseudo-plátanus.*—"Plantations, not indigenous"—Hooker.

CHLO'RA (Yellow Wort).—See *Gentianáceæ*, p. 140.

C. *perfoliáta.*—Chalk pits, &c., middle and south of England.

MENZIE'SIA (————————).—See *Ericáceæ.*—"Calyx of four to five deep segments. Corolla monopetalous, ventricose. Capsule four to five-celled."

M. *cærúlea.*—"Leaves numerous, linear, toothed. Flower stalks terminal, aggregate, simple. Flowers five-cleft, decandrous.
"Near Aviemore, Strathspey. Western isles of Sheant."

M. *polifólia.*—"Leaves oval, with revolute margins, white and downy beneath. Flowers four-cleft. Octandrous in terminal leafy racemes.
"Mountainous heaths in Ireland."

ERI'CA (Heath).—See *Ericáceæ*, p. 142.

E. *tétralix* and *cinérea* are common.

E. *mediterránea.*—Corolla narrow, urceolate. Calyx coloured. Flowers axillary.

"Urrisbeg mountain, Ireland."

E. *vágans.*—"Corolla campanulate. Flowers axillary, crowded.

"Cornwall."

E. *ciliáris.*—Approaches *tétralix*, with larger flowers and ciliate glandulose leaves.

Cornwall, near Truro. A recent addition to the British Flora.

CALLU'NA (Ling).—See *Ericáceæ*, p. 142.

C. *vulgáris.*—Everywhere on heaths.

E. *tétralix*, E. *cinérea*, and C. *vulgáris*, are frequently found with white flowers.

VACCI'NIUM (Whortleberry).—See *Vaccináceæ*, pp. 143, 144.

V. *myrtillus.*—Woods and heathy parts, common.

V. *uliginósum.*—Mountainous bogs. Abundant in the Highlands of Scotland.

Distinct from V. *myrtillus*, by the round stem and deciduous leaves.

V. *vitis idæ'a.*—"Racemes terminal, drooping. Flowers campanulate. Leaves evergreen, oboval."

"Dry places on heaths. Mountains, and in woods North of England. Wales, Scotland, and Ireland."

V. *oxycóccus* (Cranberry).—"Peat bogs. England, Scotland, and Ireland."

ŒNOTHE'RA (Evening Primrose).—See *Onagráceæ*, p. 199.

Œ. *biénnis.*—"Apparently indigenous, but not truly so."

EPILO'BIUM (Willow herb).—See *Onagráceæ*.

E. *angustifólium.*—"Rare in England; frequent in many parts of Scotland." About Rake, near Petersfield, and between Petersfield and Alton, not rare. On dry banks and woods.

E. *hirsútum*, *parviflórum*, *palústre* and *tetragónum* are common in bogs.

E. *roséum* grows in rather boggy parts; and E. *montánum* on walls and dry places.

E. *alsinifólium* and E. *alpínum* are Alpine species; the former is allied to E. *montánum*, but has the stigma entire. E. *alpínum* bears one or two bright red, terminal flowers, with a capsule nearly as long as the plant. E. *alsinifólium* "is found on the Cheviot hills, and in Wales, frequent." E. *alpínum* "is found by the sides of rills, on all the Highland mountains."

DA'PHNE (Mezereon and Spurge Laurel).—See *Thymeliáceæ*, p. 126.

D. *mezéreon.*—Rare. Hampshire, Sussex, &c., in woods.

D. *lauréola.*—"Woods in England not rare. Uncommon in Scotland."

Order II.—TRIGY'NIA.—(Three styles).

PO'LYGONUM (Persicaria, Knot-Grass, Buckwheat).—See *Polygonáceæ*, pp. 123, 124.

P. *bistórta.*—Not common. Meadows.

P. *vivíparum.*—Easily known from *bistórta* by its bulbiferous spike. Mountainous pastures North of England. Abundant in the Highlands of Scotland.

P. *aviculáre.*—Grows everywhere, on waste grounds, fields, &c.

Var. β, P. *maritimum*, with quite smooth fruit, longer than the perianth. Cornish coast. West of Scotland. Ireland, near Dublin.

P. *fagopy'rum* (Buck-Wheat).—A weed in cultivated soils and on rubbish.

P. *convólvulus* (Climbing Buck-Wheat).—Gardens, &c., a most troublesome weed.

P. *amphíbium*.—Var. *a*, *aquáticum*, β, *terréstre*.—Margins of ponds, lakes, &c.

P. *persicária*.—Moist ground, common.

P. *lapathifólium*.—Fields and rubbish.

P. *hydrópiper* and P. *minus*.—Lakes and moist commons.

Order IV.—TETRAGY'NIA.—(Four styles.)

PA'RIS (Herb Paris).—See *Melanthácea*, p. 107.

P. *quadrifólia*.—Shady places in woods.

ADO'XA (Moschatell).—See *Araliáceæ*, p. 198.

A. *moschatéllina*.—Woods, hedges, &c.

ELA'TINE (Water-Wort).—See *Elatináceæ*, p. 69.

E. *hexándra*.—Flowers hexandrous (six stamens), tripetalous. Capsule turbinate, three-celled, about twelve seeds in each.

Margins of ponds and ditches, rare. Bonner Pool, near Condover, Shropshire—Rev. E. Williams. Binfield, Berks—Mr. T. F. Forster. Crawley, Sussex—Mr. Borrer.

E. *hydrópiper*.—Flowers octandrous, tetrapetalous. Capsule roundish, four-celled, with sixteen seeds in each.

Discovered in 1830 at the east end of Llyn Coron, Anglesea, by Mr. J. E. Bowman.

Class IX.—ENNEA'NDRIA.—(Nine stamens.)

Order I.—HEXAGY'NIA.—(Six styles.)

BU'TOMUS (Flowering-Rush).—See *Butomáceæ*, p. 107.

B. *umbellátus*.—Rivers, &c., rare in Scotland.

Class X.—DECA'NDRIA.—(Ten stamens.)

Order I.—MONOGY'NIA.—(One style.)

MONO'TROPA (Bird's Nest).—See *Monotropáceæ*, p. 143.

M. *hypópithys*.—Beech and fir woods, not common.

PY'ROLA (Winter-Green).—See *Pyroláceæ*, p. 143.

P. *uniflóra*.—" Leaves roundish. Flower solitary."

Woods, in Scotland, rare; near Brodie House, Forres; Woods at Scone, Perthshire.

P. *secúnda*.—" Flowers unilateral. Leaves oval, serrated."

Rare in England; not uncommon in Scotland, especially in the Highlands.

P. *rotundifólia*.—Florescence racemous, pendulous. Leaves oboval, roundish, slightly crenated. Style bent down and curved upwards at the extremity. much longer than the stamens.

Moist woods and bushy places, rare; Bradwell and Middleton, Suffolk; Larlingford, Norfolk—Rev. G. R. Leathes. Kent —Rev. G. E. Smith. Gonnacha Wood, Forfarshire—J. D. H.

P. *média.*—Stamens erect. Style straight or slightly decurved. Stigma with five erect points.

Woods, chiefly in the north.

P. *mínor.*—Stamens equal to the very short, straight style. Stigma large, with five divergent rays.

Woods, north of England and Scotland.

ANDRO'MEDA (————).—See *Ericáceæ,* p. 142.—"Calyx deeply five-cleft. Corolla monopetalous, ovate or campanulate. Capsule four to five-celled."

A. *polifólia.*—Leaves alternate, lanceolate, with glaucous revolute margins. Flowers in short terminal racemes.

Peat Bogs, Larlingford, Norfolk—Rev. G. R. Leathes. North of England, Lowlands of Scotland, and Ireland—Mr. J. T. Mackay.

A'RBUTUS (Strawberry Tree).—See *Ericáceæ,* p. 142.—Calyx five-parted. Corolla monopetalous, ovate. Fruit a berry, five-celled, many-seeded.

A. *unédo.*—A small tree, with elliptic, lanceolate, serrated leaves. Flowers in terminal panicles. Fruit tuberculate.

Lakes of Killarney.

A. *alpína.*—Stem procumbent, with wrinkled serrated leaves.

Ben-nevis; mountains of Sutherland, and Hoy, Orkney.

A. *uva-úrsi.*—Stems procumbent. Leaves oboval, entire, evergreen. Known from A. *alpína* by the evergreen leaves and red fruit. In A. *alpina* the fruit is black and the leaves become red.

"Highlands and Western Isles. North of England and Ireland."

Order II.—DIGY'NIA.—(Two styles.)

SCLERA'NTHUS (Knawel).—See *Illecebráceæ,* p. 160.

S. *ánnua.*—Cornfields, not rare. The other species, S. *perénnis,* is said to differ in having a perennial root; they are closely allied.

"Open dry sandy fields in Norfolk and Suffolk."

CHRYSOPLE'NIUM (Golden Saxifrage).—See *Saxifragináceæ,* p. 198.

C. *alternifólium.*—Lower leaves sub-reniform, on very long footstalks, distinguished from the next by its alternate leaves.

Boggy places, among rocks and springs, rare. Cheshire. Norfolk. Roslin Woods; Bilston Burn and St. Bernard's Well, Edinburgh,

C. *oppositifólium.*—Moist shady places, not rare.

SAXI'FRAGA (Saxifrage).—See *Saxifragináceæ,* p. 198.

S. *géum.*—Leaves roundish, reniform, acutely crenate, more or less hairy. Scape panicled. Fruit superior.

Killarney, and mountains of Cork.

S. *hirsúta* is distinguished from S. *géum* by its oval leaves.

The Rev. W. T. Bree considers it a hybrid between S. *géum* and S. *umbrósa.*

Same localities.

S. *umbrósa* (London Pride).—Leaves roundish, oval. Panicle small.

Mountains South of Ireland.

S. *stelláris*.—Leaves oblong, cuneate, scarcely petiolate. Panicle subcorymbous.

Mountains North of England, Scotland, and Ireland.

S. *nivális* is distinct from S. *stelláris* by its half inferior fruit.

Mountains of Wales. Highlands of Scotland.

S. *oppositifólia*.—Leaves imbricated. Flowers solitary, terminal.

Ingleborough, Yorkshire; Snowden, &c. Highlands of Scotland.

S. *hírculus*.—Known by its solitary, large, yellow flowers.

Wet moors, very rare. Knutsford, Cheshire. Cotherstone Fell, Yorkshire.

S. *aizoides*.—Lower leaves of the stem crowded; the rest scattered, linear, lanceolate, fleshy. Flowers panicled.

Alpine rills and springy places North of England. Wales and Scotland.

S. *granuláta*.—Common in Surrey on a sandy soil. Scarcely known in the Highlands of Scotland.

S. *cérnua*.—Radical leaves reniform, on long foot-stalks; superior nearly sessile, sub-trifid. Stem simple, bulbiferous, with a solitary flower.

Dry rocks on the highest of the Breadalbane Mountains. Top of Ben Lawers, discovered by Mr. Townson.

S. *rivuláris*.—Leaves three to five lobed, palmate, glabrous, on long stalks. Stem slender, branched; branches few-flowered; bracts oblong; sessile, three-lobed; capsule half inferior.

Alpine rocks, Scotland, rare. Near the summit of Ben Nevis. Plentiful on Loch-na-garr, Forfarshire.

S. *tridactylites*.—Common on brick walls in England, and the Lowlands of Scotland.

S. *hypnoides*.—Radical leaves three to five cleft. Stems procumbent, with undivided, or three-cleft bristle-pointed leaves. Petals roundish, oboval or oblong, three-ribbed.

Not uncommon in Derbyshire, about Castleton, Dovedale, &c.

There are several varieties of this species, distinguished chiefly by the leaves of the procumbent shoots.

S. *affínis*.—Radical leaves five-cleft, of the trailing shoots three-cleft. Sepals subulate, channelled, pointed, recurved. Petals inflexed.

Brandon Mountains, Kerry.

S. *incurvifólia*.—Known from *affínis* chiefly by the obtuse segments of the leaves and sepals.

Alpine rocks, Ireland.

S. *elongélla* and *lætevirens* are closely allied to the following, and chiefly distinguished by the bristle-pointed segments in *elongélla*, and by the incurved segments in *lætevírens*.

Mountains of Angus—Mr. G. Don.

S. *cæspitósa*.—Radical leaves crowded, three to five cleft, obtuse, veiny, fringed, lowermost undivided. Flowers five or more. Fruit half inferior. Calyx obtuse. Petals rounded.

Mountains of Wales and Ireland. Aberdeenshire.

S. *muscoides*.—Radical leaves crowded, linear, obtuse, entire, and trifid. Stem nearly bare, few-flowered. Petals oblong, obtuse, buff-coloured, a little longer than the calyx.

Mountains above Ambleside, Westmoreland—Hudson (D. Don).

S. *pedatífida.*—Radical and cauline leaves on long petioles, three-parted; the lateral segments bifid. Panicle cymous.

Mountains of Clova—G. Don.

SAPONA'RIA (Soap-Wort).—See *Silenáceæ* (*Caryophylláceæ*) p. 168, 169.

S. *officinális.*—"Roadsides and hedge banks, especially near cottages."

DIA'NTHUS (Pink).—See *Caryophylláceæ,* p. 168.

D. *arméria* (Deptford Pink).—Pastures and hedges, England.

D. *prólifer.*—Flowers clustered, capitate.

"Gravelly pastures in England, rare. Selsey Island, Sussex. Near Hampton Court. Near Norwich. Hanby Castle, Worcestershire. Ryde, Isle of Wight."

D. *caryophy'llus* (Carnation).—"Ruined walls as at Norwich. On the castles of Deal, Sandown, Rochester, &c."

D. *deltoides* (Maiden Pink).—Borders of fields, on a gravelly or sandy soil.

D. *cæ'sius* (Mountain Pink).—"Stems mostly single-flowered. Scales of the calyx short, roundish. Petals unequally jagged, hairy."

"Very rare. Limestone rocks, Cheddar, Somersetshire."

Order III.—TRYGY'NIA.—(Three styles).

SILE'NE (Catchfly).—See *Caryophylláceæ,* p. 168.

S. *acaúlis.*—Cæspitose, leaves linear, ciliated at the base. Peduncles solitary, single-flowered. Petals crowned.

Rocky places, Snowdon. Common on the Scotch Mountains.

S. *infláta* (Bladder Campion).—Roadsides, borders of fields, common.

S. *marítima* (Sea Catchfly).—Rocks, Stonehaven, &c.; Hunstanton—The Rev. G. Munford.

S. *otítes* (Spanish Catchfly.)—Sandy fields, Norfolk, Suffolk, and Cambridgeshire, Gayton, cornfields, rare—The Rev. G. Munford.

S. *ánglica* (English Catchfly).—Sandy fields, not common.

S. *quinque vúlnera.*—Petals roundish, entire. Flowers unilateral.

In sandy cornfields, rare. A common annual in gardens.

S. *nútans.*—Flowers unilateral. Calyx cylindric, ventricose. Petals deeply cleft, with linear segments.

About Nottingham, on rocks, as the Castle Rock. Rocks in Dovedale, &c.

S. *itálica* differs from *nútans* in the longer, more clavate calyx, the want of a crown, and in the broader segments.

Cliffs, Dover—Mr. T. E. Foster, and Mr. Peete.

S. *cónica.*—Sandy fields, New Romney, &c.

S. *noctiflóra.*—Cornfields, Northampton, Essex, &c.; Lynn—Rev. G. Munford.

S. *arméria.*—"Panicles forked, corymbous, florescence crowded. Petals notched, and crowned with subulate scales. Calyx and leaves glabrous. Stem viscid. A doubtful native."

Very common in gardens.

STELLA'RIA (Stitchwort).—See *Caryophylláceæ,* p. 169.

S. *némorum.*—"Leaves cordate; upper oval, sessile.

Moist woods, chiefly in North of England, and Lowlands of Scotland."

S. *média* (Chick-weed).—Everywhere.

S. *holóstea.*—Hedges, very common.

S. *graminea.*—Bushy places, &c., common

S. *glaúca.*—Marshes not common, except in the Fens.

S. *uliginósa.*—Marshes, very common in ditches.

S. *cerastoídes.*—Stems decumbent, with an alternate hairy line. Leaves oblong, spathulate. Peduncles two to three, mostly terminal, downy. Calyx half the length of the corolla.

Breadalbane Mountains, &c.

S. *scapígera.*—" Leaves linear, lanceolate, crowded, scabrous at the margin. Calyx as long as the petals.

"Hills to the North of Dunkeld, and Loch Nevis—G. Don."

ARENA'RIA (Sandwort).—See *Caryophylláceæ*, p. 129.

A. *peploídes.*—" Leaves oval, acute, fleshy, glabrous. Calyx obtuse."

On sandy sea-shores, frequent.

A. *trinérvis.*—Under hedges, not rare.

A. *serpy'llifolia.*—Walls and dry places, common.

A. *ciliáta.*—Leaves roughish, ciliated at the base. Stems much branched, procumbent. Flowers solitary, terminal. Sepals half as long as the corolla.

Mountains in Ireland, rare.

A. *vérna.*—" Stems numerous, panicled. Leaves subulate, acute. Petals oboval. Sepals lanceolate, acuminate, three-nerved."

Common about the mouth of lead mines, Derbyshire.

A. *rubélla.*—" Stems numerous. Peduncles terminal, single-flowered. Leaves linear, subulate, obtuse, three-nerved. Petals elliptic, lanceolate, shorter than the lanceolate sepals.

Breadalbane Mountains, very rare."

A. *tenuifólia.*—Sandy fields, Norfolk, Cambridge, &c., not common.

A. *fastigiáta.*—" Stems erect, straight. Leaves fascicled, subulate, setaceous. Flowers fascicled. Calyx much acuminated, twice as long as the petals."

" In Fifeshire, and mountains of Angus."

A. *rúbra.*—Gravelly places frequent.

A. *marína.*—Sea-coast.

CHERLE'RIA (Cyphel).—See *Caryophylláceæ.*—Sepals united at the base. Petals five, extremely minute, notched. Capsule one-celled, three-valved, many-seeded.

C. *sedoídes.*—" Flowers solitary, imbedded among the dense mass of foliage, yellow-green."

Breadalbane Mountains.

Order IV.—PENTAGY'NIA.—(Five styles).

COTYLE'DON (Pennywort).—See *Crassuláceæ*, p. 170.

C. *umbílicus.*—Chiefly in sub-alpine countries, on rocks, walls, &c.

C. *lútea.*—" Lower leaves only somewhat peltate, crenate. Flowers erect, racemous.

" Walls and rocks very rare. West Riding of Yorkshire—Mr. Tofield."

SE'DUM (Orpine and Stone-Crop).—See *Crassuláceæ*, p. 171.

S. *teléphium* (Orpine).—Borders of fields, hedge banks, &c.

S. *dasyphy'llum* (Thick-leaved Stone-Crop).—" Walls and rocks. England and Wales. Colinton Woods, Edinburgh—Mr. Arnott."

S. *ánglicum* (English Stone-Crop).—Beach at Stonehaven, &c.

S. *álbum* (White Stone-Crop).—Walls and roofs. Middlesex. About Peterborough.

S. *villósum*.—"Leaves scattered, oblong, flattened above, hairy, and viscid.

"Frequent, North of England, in stony moist places."

S. *ácre*.—On sandy grounds, rocks and walls, common.

S. *sexanguláre*.—"Distinguished from *ácre*, by its larger, slenderer, spreading leaves.

"East of England, rare."

S. *refléxum*.—Common on walls and roofs.

S. *glaúcum*.—"Sepals narrower, and more pointed; branches more uniformly spreading. Leaves slenderer.

"Rough hills near Milden Hall, Suffolk."

S. *rupéstre*.—Leaves glaucous, produced at the base; those of the branches awl-shaped, erect, in five close rows. Flowers imperfectly cymous. Sepals elliptical, obtuse.

St. Vincent and Cheddar Rocks, Somersetshire.

S. *forsteriánum*.—"Approaches *refléxum*; is distinguished by a compact, hemispherical, or round topped cyme."—Hooker.

OXA'LIS (Wood-Sorrel).—See *Oxaláceæ*, p. 173.

O. *acetosélla* is common in woods.—"*Corniculáta* is found in waste shady places in the South of England."

AGROSTE'MMA (Cockle).—See *Caryophylláceæ*, p. 168.

A. *githágo*.—Not rare in cornfields.

LY'CHNIS (Catchfly, or Lychnis).—See *Caryophylláceæ*, p. 168.

L. *floscúculi*.—Moist pastures, frequent.

L. *viscária*.—"Petals slightly notched at the tips. Joints of the stem clammy."

Dry alpine rocks; Montgomeryshire; Edinburgh; Newburgh, Fifeshire.

L. *alpína*.—"Glabrous petals bifid. Flowers corymbous, capitate. Capsule one-celled."

Clova mountains—Mr. G. Don.

L. *dioíca*.—Var. L. *sylvéstris* and *vespértina*.—Common. The first in hedges and woods; the second in fields.

CERA'STIUM (Mouse-Ear, Chickweed).—See *Caryophylláceæ*, pp. 169, 170.

C. *vulgátum* (Broad-leaved Ditto).—Fields and roadsides, common.

C. *viscósum* (Narrow-leaved Ditto).—Everywhere.

C. *semidecándrum*.—Dry waste places, frequent.

C. *tetrándrum*.—A var. with four stamens, sometimes five (Hooker).

C. *arvénse*.—Gravelly places, not common. This species has the habit of *Stellária*.

C. *alpínum* (Alpine ditto).—Sub-glabrous or clothed with white silky hairs. Leaves elliptical. Panicle dichotomous.

Frequent on the Highland mountains.

C. *latifólium* (Broad-leaved Alpine ditto).—Sub-glabrous or clothed with short rigid or yellowish pubescence. Leaves elliptic, oval. Branches mostly one-flowered.

Mountains of Wales and Scotland.

C. *aquáticum*.—Rivers and ditches, not rare.

SPE'RGULA (Spurrey).—See *Caryophyllácea*, p. 170.
S. *arvénsis* (Corn ditto).—Everywhere in fields.
S. *nodóso* (Knotted ditto).—Wet places, not rare.
S. *saginoides* (Pearl-Wort ditto).—" Leaves subulate, glabrous. Peduncles very long, solitary. Petals shorter than the calyx. Capsule twice as long.
" Highland mountains, frequent."
S. *subuláta*.—" Dry gravelly and stony pastures, not common."

CLASS XI.—DODECA'NDRIA.—(Twelve [Nineteen] stamens.)

Order I.—MONOGY'NIA—(One style).

A'SARUM (Asarabacca).—See *Aristolochácea*, p. 48. " Perianth three-cleft. Capsule six-celled."
A. *europa'um*.—" Leaves binate, reniform, obtuse.
" Woods in the North, Lancashire and Westmoreland."
LY'THRUM (Purple Loose-strife).—See *Lythrácea*, p. 159.
L. *salicária*.—Watery places, banks of rivers, not scarce.
L. *hyssopifólium*.—Leaves mostly alternate, linear, lanceolate, obtuse. Flowers axillary, solitary. Stamens about six. Annual.
"Moist and inundated places, chiefly in the east of England."

Order II.—DIGY'NIA.—(Two styles).

AGRIMO'NIA (Agrimony).—See *Rosácea*, Sub-Order *Potentillíneæ*, p. 189.
A. *eupatória*.—Borders of fields, waste places, &c., common.

Order III.—TRIGY'NIA.—(Three styles).

RESE'DA (Dyers' Weed).—See *Resedáceæ*, p. 165.
R. *lutéola*.—Common on chalk. Kildrummy Castle. Aberdeenshire.
R. *lutea*.—Very common on chalky fields.
R. *fruticulósa*.—" Leaves all pinnated, undulate, glaucous. Calyx five-parted. Petals five, trifid.
" Between Marazion and Penzance—Rev. J. S. Tozer."

Order IV.—DODECAGY'NIA.—(Styles indefinite).

SEMPERVI'VUM (House Leek).—See *Crassuláceæ*, p. 170.
S. *tectórum*.—On roofs, not rare.

CLASS XII.—ICOSA'NDRIA.—(Stamens indefinite, inserted on the calyx.)

Order I.—MONOGY'NIA.—(One style.)

PRU'NUS (Plum and Cherry).—See *Amygdalíneæ*, p. 186.
P. *doméstica* (Common Plum).—" Woods and Hedges, scarcely wild."
P. *insititia* (Wild Bullace).—A small tree, in woods and hedges.

P. *spinósa* (Sloe).—Hedges, &c., common.
P. *pádus* (Bird Cherry).—“ Woods and hedges, not rare in the North.”
P. *cérasus* (Wild Cherry).—Woods and hedges.

Order II.—PENTAGY'NIA.—(Five styles).

ME'SPILUS (Medlar).—See *Pyrineæ*, p. 187.—“ Segments of the calyx superior (*i. e.* above the fruit). Disk large. Styles two to five. Fruit turbinate, with the upper end of the cells, which are bony, exposed.”

M. *germánica*.—“ Leaves lanceolate, a little downy. Flowers solitary, terminal, nearly sessile.”

“ Hedges, in Sussex and Cheshire; Redhill, Reigate, and between Reigate and Nuttfield—J. S. Mills, Esquire.”

CRATÆ'GUS (Hawthorn).—See *Pyrineæ*, p. 187.

Cr. *oxyacántha*.—Woods and hedges. A most valuable tree for fences.

COTONEA'STER (Quince).—“ Flowers polygamous, *i. e.* some perfect and some barren on the same tree. Calyx turbinate, with five short teeth. Petals five, small, erect. Stamens equal to the teeth of the calyx in length. Fruit turbinate. Nuts adhering to the inside of the calyx, but not cohering in the centre.”

C. *vulgáris*.—“ Leaves oval. Calyx glabrous. Peduncles slightly downy.

“ Limestone Cliffs, at Ormeshead, Caernarvonshire—Mr. Wilson.”

PY'RUS (Apple).—See *Pyrineæ*, p. 187.

P. *commúnis* (Pear), and *málus* (Apple), grow in woods and hedges; the latter more frequently than the former.

Both rather common in woods and hedges about Guildford. Road between Guildford and Albury, Merrow Downs.

P. *torminális* and P. *aucupária* (Wild Service and Mountain Ash Trees) are found in similar localities; the former rather uncommon; the latter frequent.

P. *doméstica* (Service Tree).—Leaves pinnate, downy beneath. Leaflets serrated upwards. Flowers panicled. Fruit obovate.

“ Mountainous parts of Cornwall and Staffordshire, rare.”

P. *pinnatifida*.—Leaves entire, pinnatifid, and pinnate. Considered a variety of the following—(Hooker).

P. *ária* (White Beam Tree).—On chalk and limestone, not rare.

SPIRÆ'A (Dropwort or Meadow-sweet).—See *Spirineæ*, p. 188, 189.

S. *salicifólia* (Willow-leaved ditto).—Common in shrubberies. “ Moist woods North of England and Scotland.”

S. *filipéndula* (Dropwort).—Pastures on a chalky soil, not rare.

S. *ulmária* (Meadow-sweet).—River sides and marshes, common.

Order II.—POLYGY'NIA.—(Styles indefinite).

RO'SA (Rose).—See *Rosineæ*, p. 188.

R. *dicksóni* (Dickson's ditto).—Young shoots hairy, prickles scattered, slender, subulate. Leaflets oval, coarsely and irregularly serrated, hoary, slightly glandulous beneath. Segments of the calyx long, simple. Fruit ovate, urceolate. Bracts large.

Ireland, discovered by Mr. J. Drummond.

R. *cinnamómea* (Cinnamon ditto).—Shoots and prickles as in R. *dicksóni*.

Leaflets lanceolate, oblong, simply serrated, downy and glandulose below. Segments of the calyx long, simple. Fruit small, ovate. Bracts large.

Wood, Aketon Pasture, near Pontefract. Birkhill, Galston, Ayrshire—Miss Brown.

R. *rubélla*.—Stem and branches densely hairy, prickles few, slender, nearly straight. Leaflets simple, serrated, smooth. Fruit oblong, or urceolate. Bracts small.

Rare. Sandy sea-coast of Northumberland—Mr. Winch. Banks of the Dee, about Abergeldy—Mr. Anderson.

R. *spinosíssima* (Burnet-leaved Rose).—On heaths and in hedges. Most common on chalk.

R. *hibérnica* (Irish ditto).—Shoots and branches slightly hairy, prickles scattered, unequal, larger, somewhat falcate. Leaflets simply serrated, hairy beneath. Segments of the calyx pinnated. Fruit nearly globular.

Kerry and Down, Ireland.

R. *wilsóni* (Wilson's ditto).—Prickles unequal, straight, intermixed with setæ. Leaflets simply serrated, hairy. Fruit ovate, urceolate.

On a declivity by the Menai, near Bangor.

R. *involúta*.—Prickles crowded, as in R. *wilsóni*, unequal, straight, intermixed with setæ. Leaflets doubly serrated, hairy. Stem dwarfish.

Hebrides, and Western Isles.

R. *sábini* (Sabine's ditto).—Shoots and branches hairy, prickles scattered, unequal, nearly straight. Leaflets doubly serrated, hairy, glandulose beneath. Calyx somewhat pinnate.

Scotland, and North of England.

Of this rose there are various sorts, distinguished by the number and shape of the prickles.

R. *villósa*.—Prickles nearly straight, uniform. Leaflets doubly serrated, downy, glandulous. Segments of the calyx slightly pinnated. Shoots straight.

North of England. Wales. Scotland. Ireland.

R. *tomentósa* (Downy-leaved ditto)—Woods and hedges not rare. Of this species there are the following varieties:—

1. Shoots arched. Fruit oblong. Prickles straight.
2. Shoots and fruit as (1). Prickles falcate (like a scythe).
3. - - arched. Fruit urceolate. Prickles straight.
4. - - - - - - - Prickles falcate.
5. - - - - - - - Prickles uncinate (hooked).
6. - - straight. Fruit oblong. Prickles nearly straight.
7. - - - - - - - Prickles of branches falcate; the rest straight.

R. *inodóra*.—Prickles uniform, uncinate. Leaves doubly serrated, hairy, mostly glandulous beneath. Segments of the calyx closely pinnate, mostly deciduous. Fruit elliptic, globular.

Thickets and hedges, chiefly in the South of England.

Var. β. Leaves hairy on both sides. Near Edinburgh.

Var. γ. Leaves more glandulous. Segments of calyx elongated, persistent.

Near Newcastle.

R. *micrántha*.—Commons and hedges, not rare in the South of England.

R. *rubiginósa* (Sweet Briar).—Same localities as the preceding.

R. *sépium*.—Chiefly distinguished from the Sweet Briar by the smaller acute leaflets at each end. About three feet high, densely branched.
Near Bridport, Warwickshire—Rev. W. J. Bree.

R. *canína* (Dog Rose).—Common in hedges, &c.

R. *bractéscens*.—Bracts longer than the fruit. Leaves simply serrated, downy below.
Ulverstone, Lancashire.

R. *cæ'sia*.—Prickles uniform, uncinate. Leaflets doubly serrated, downy. Segments of calyx slightly pinnate. Styles not united.
Var. β *incána*.—Prickles strongly uncinate, from a much lengthened base.
Highland valleys of Perthshire, Northumberland, and Durham.
Var. β, Scotland—Late Mr. G. Don.

R. *sy'styla*.—Prickles uniform, uncinate. Leaves simply serrated. Segments of calyx slightly pinnate, deciduous. Styles united, smooth.
Thickets and hedges in Sussex, Essex, Middlesex, and Berks.

R. *arvénsis*.—Woods and hedges, &c., South of England.

RU'BUS (Bramble).—See *Potentillíneæ*, p. 190. 193.

R. *idæ'us*.—Cambridgeshire and Hampshire, truly wild; also, between Sutton, Abinger, and the hills, Surrey.

R. *suberéctus*.—" Stem nearly erect, prickles uniform, few, small. Leaves digitate, quinate. Leaflets flexile; lower sessile, or nearly so. Panicle nearly simple."
Chiefly in mountainous districts in the North. Large bog near Stokesbury, Hants. Tunbridge Wells.

R. *carpinifólius*, *rhamnifólius*, *fruticósus*, and *leucóstachys*, are common in hedges, especially about Primrose Hill and Hampstead.

R. *macrophy'llus*.—Stem somewhat angular and furrowed, prickles uniform, few, small. Leaves digitate, of three to five stalked, elliptical or oval, flexible leaflets. Panicle repeatedly divided, somewhat corymbous.
Hedges, thickets and woods, rare? Sussex.

R. *corylifólius*, *koehléri*, and *cæ'sius* are common in woods, hedges, heaths, &c.

R. *saxátilis*.—Leaflets three, slightly downy. Stem mostly herbaceous. Panicle of few flowers.
Stony places in the North.

R. *árcticus*.—Leaflets three, glabrous, obtusely serrated. Stem one-flowered.
Rocky mountainous parts of the Isle of Mull—Dr. Walker.

R. *chamæmórus* (Cloud Berry).—Diœcious. Leaves simple, lobed. Stems single-flowered.
Alpine Moors, North of England. Wales, Scotland, Ireland. Hills, north of Castleton, Derbyshire. Hills above Edale.

FRAGA'RIA (Strawberry).—See *Potentillíneæ*, p. 189.

F. *vésca*.—Woods, not rare.

F. *elátior* (Hautboy Strawberry).—Groves and hedges in several places; but scarcely indigenous—Hooker.

CO'MARUM (Marsh Cinque-foil).—See *Potentillíneæ*, p. 190.

C. *palústre*.—Marshes and peat bogs.

POTENTI'LLA (Cinque Foil).—See *Potentillíneæ*.

P. *fruticósa* (Shrubby Cinquefoil).—Leaves pinnate. Leaflets five, oblong, lanceolate, entire. Stem shrubby.

Rare. In rocky and bushy places. Middleton Teesdale, Yorkshire.

P. *ansérina* (Silver Weed).—Meadows, roadsides, common.

P. *rupéstris.*—Stem erect, dichotomous. Leaves pinnate. Leaflets of the root leaves five, of the cauline three, all cuneate, oval, serrated, hairy.

Very rare. Craig Breidhin, Montgomeryshire—Ray. Found again, in 1817, by J. E. Bowman, Esq.

P. *argéntea* (Hoary ditto).—On gravel, by roadsides, not uncommon.

P. *vérna* (Spring ditto).—Root leaves quinate. Leaflets oboval, green on both sides, sharply serrated upwards, hairy beneath and at the edge. Petals obcordate, longer than the calyx. Stem decumbent.

Dry pastures, Suffolk, Cambridge, &c.

P. *alpéstris.*—Radical leaves in fives, deeply cut in the upper half. Stem ascending. Allied to *Vérna.* Dr. Hooker doubts whether it be really distinct.

Breadalbane and Clova mountains.

P. *opáca.*—Radical leaves of seven leaflets, hairy and linear, deeply serrated. Cauline leaves ternate.

Hills of Clova and Braes of Balquhidder.

P. *álba.*—Stems filiform. Root leaves in fives; upper ternate, silky beneath. Flowers white.

Wales?—Mr. Haviland (in Hudson).

P. *réptans.*—Common in meadows, pastures, &c.

P. *tridentáta.*—Leaves ternate, glabrous above, hairy below. Petals oval, longer than the calyx. Stem ascending.

Very rare. Werron hill and the rocks of Clova—Mr. G. Don.

P. *fragariástrum,* P. *fragária.*—Common on banks; one of our earliest flowerers.

TORME'NTILLA (Tormentil).—See *Potentillíneæ,* p. 189.

T. *officinális* is common on heaths, &c. T. *réptans,* hedges and waste places, not common. Difficult to be distinguished from *Poténtilla réptans.*

GE'UM (Avens).—See *Potentillíneæ,* p. 189.

G. *urbánum.*—Common in hedges.

G. *rivále.*—Flowers drooping. Awns feathery.

Marshes and wet moors. Common in Derbyshire.

DRY'AS (————).—See *Potentillíneæ.*—"Calyx eight to ten cleft, with equal segments. Petals five to eight. Pericarps with long feathery awns."

D. *octopétala.*—"Petals eight. Leaves simple, serrated."

"In alpine parts of England, Scotland, and Ireland, especially on limestone."

Class XIII.—POLYA'NDRIA.—(Stamens indefinite, inserted on the receptacle.)

Order I.—MONOGY'NIA.—(One style.)

PAPA'VER (Poppy).—See Order *Papaveráceæ,* p. 182.

P. *argemóne.*—Cornfields, not rare. P. *hy'bridum.*—Chalky fields, not common. P. *dúbium.*—Cornfields, not uncommon.

P. *rhœ'as.*—Very common. P. *sómniferum.*—Cornfields, Kent, Cambridge, Norfolk, &c.

MECONO'PSIS (Welsh Poppy).—See *Papaveráceæ.*—Calyx of two caducous sepals. Capsule opening at the top by four to six valves.

M. *cámbrica.*—" Leaves petiolate. Capsules glabrous."

Rare. Rocky and shady places. Lidford cascade, Devon: Cheddar, Somerset.

GLA'UCIUM (Horned Poppy).—See *Papaveráceæ*, pp. 182, 183.

G. *lúteum.*—Sea shores, not rare.

G. *phœ'niceum* and *violáceum* are rare and doubtful English plants. They are stated to have been found in Norfolk and Cambridgeshire, and in Portland Island.

CHELIDO'NIUM (Celandine).—See *Papaveráceæ*, p. 182.

C. *május.*—About waste places and rubbish, not rare.

A variety with semi-double flowers, near Dorking, Epping.

ACTÆ'A (Baneberry).—See *Ranunculáceæ.*—" Calyx tetra-sepalous, caducous. Petals four. Fruit a single, many-seeded berry."

A. *spicáta.*—" Florescence a long simple spicate raceme.

" Bushy places, especially limestone tracts, Yorkshire."

HELIA'NTHEMUM (Rock Rose).—See *Cistináceæ*, p. 182.

H. *cánum.*—Shrubby. Leaves opposite, oval, oblong, petiolate, flat, hoary beneath. Racemes terminal, bracteate, and style twisted at the base, inflexed at the apex. Seeds blackish.

" Alpine rocks, North of England. Cronkley Fell, Yorkshire."

H. *guttátum.*—Stem annual, erect. Style straight.

Very rare. " Holyhead Mountain—Rev. H. Davis. In Jersey."

H. *ledifólium.* — " Herbaceous, slightly downy. Leaves stipulate. Flower stalks solitary, opposite. Capsule polished."

Brent Downs, Somerset. Hudson.

H. *vulgáre.*—Common on a chalky soil. Not rare on gravel.

H. *polifólium.*—Shrubby, procumbent, with hoary stipulate leaves. Racemes terminal, bracteated, and style bent at the base, somewhat clavate at the apex. Seeds black.

South of England, rare. Brean (Brent?) Downs, Somerset. Near the sea, at Torquay—The Dean of Bristol.

TI'LIA (Lime Tree).—*Tiliáceæ*, p. 181.—The Limes are doubtful natives of Britain. They are all found in woods and hedges, especially T. *europœ'a.*

NYMPHÆ'A (Water Lily).—See *Nymphæáceæ*, p. 183.

N. *álba.*—Lakes and still waters, not rare. A magnificent flower.

NUPHA'R (Yellow Water Lilly).—See *Nymphæáceæ*, p. 183.

N. *lútea.*—Rivers, lakes, &c., frequent.

N. *púmila.*—Leaves cordate, with approximating lobes. Stigma green, with eight to nine teeth and as many yellow rays.

In several of the Highland lakes. Foot of Ben Cruachan; Loch Baladren, near Aviemore Inn; Mugdoch Lake, near Glasgow.

Order II.—PENTAGY'NIA (Styles five).

HELLE'BORUS (Hellebore).—See *Ranunculáceæ*, p. 184.

H. *víridis* is a rare plant. H. *fœ'tidus* is uncommon. They are chiefly found on chalky soils.

PÆO'NIA (Pæony).—See *Ranunculáceæ.*—Calyx five sepals. Corolla five to ten petals. Fruit two to five follicles crowned with the stigmas.

P. *corallina.*—Follicles downy, recurved. Leaves biternate, glabrous.

On the island called Steep Holmes, in the Severn.

DELPHI'NIUM (Lark-Spur).—See *Ranunculáceæ,* p. 184.

D. *consólida.*—Sandy and chalky cornfields. Common near Newmarket.

ACONI'TUM (Wolfs'-Bane).—See *Ranunculáceæ.*—Perianth single, coloured, consisting of five irregular pieces; upper one helmet-shaped, hence the name Monk's-hood, containing two bodies usually termed nectaries.

A. *napéllus.*—Upper leaflet of the calyx arched at the back. Spur of the nectary nearly conical, bent down. Ovaries three to five.

Teme, Herefordshire. Below Staverton Bridge, Devon. A doubtful native.

AQUILE'GIA (Columbine).—See *Ranunculáceæ,* p. 184.

A. *vulgáris.*—Woods in Northamptonshire, Kent, &c.

STRATIO'TES (Water Soldier).—See Order *Hydrocharidáceæ* (Monocotyledons.)

S. *aloídes.*—Common in the fens of Lincoln, &c.

Order III.—POLYGY'NIA.—(Styles indefinite)

THALI'CTRUM (Meadow Rue).—See *Ranunculáceæ,* p. 183.

T. *alpínum* (Alpine ditto).—Stem simple, nearly leafless. Raceme simple, terminal, with drooping flowers.

T. *mínus* (Small ditto).—Leaves tripinnate, with trifid roundish leaflets, glaucous beneath. Panicle diffuse.

Limestone and chalky countries. Upland pastures, Derbyshire.

T. *május* (Great ditto).—Leaves tri-quadri-pinnate. This differs from *mínus* chiefly in being twice the size and more luxuriant—(Hooker).

Stony pastures, principally in the North. Queensferry; Fenwick-Land, Ayrshire.

T. *flávum* (Yellow ditto).—Moist meadows, near rivers, not rare.

CLE'MATIS (Virgin's Bower).—See *Ranunculáceæ,* p. 183.

C. *vitálba.*—Hedges and waste places, about chalky fields, common.

ANEMO'NE (Anemone).—See *Ranunculáceæ,* pp. 183, 184.

A. *pulsatilla.*—Boroden Heath, Northamptonshire, and about Caistor, near Wansford.

A. *nemorósa* (Wood Anemone).—Woods, heaths and pastures, common.

A. *apennína.*—Wimbledon Park. Probably not indigenous—(Hooker).

A. *ranunculoídes* (Yellow ditto).—Leaves ternate or quinate. Flowers yellow.

I have never seen wild specimens of this plant, and it is not common in gardens. "Scarcely a native"—(Hooker).

ADO'NIS (Pheasant's Eye).—See *Ranunculáceæ,* pp. 184, 185.

A. *autumnális.*—Cornfields, about Dartford, Norfolk, &c.

RANU'NCULUS (Crow-Foot).—See *Ranunculáceæ,* pp. 185, 186.

R. *aquátilis* (Water ditto).—A common aquatic.

R. *hederáceus* (Ivy-leaved ditto).—Margins of pools, &c. R. *lingua*—Fens, not rare in ditches.

R. *flámmulus* (Spear Wort).—About lakes and ditches, common.

R. *gramíneus* (Grass-leaved Crow-foot).—Leaves linear, lanceolate, entire. Stem erect.

"Brought from North Wales by Mr. Pritchard" (Withering). Not rare in gardens.

R. *ficária* (See *Ficária ranunculóides*) (Pile Wort).—Pastures, &c. One of our earliest flowerers.

R. *alpéstris* (Alpine Crow-foot).—" Leaves glabrous, orbicular, deeply three-lobed. Stem one-flowered. Petals white.

" Sides of rills on the Clova mountains—Mr. G. Don."

R. *auricomus.* (Wood ditto).—Not rare in woods.

R. *scelerátus* (Celery-leaved ditto).—Ditches, &c., common.

R. *ácris, répens,* and *bulbósus* (Butter Cups) are common in pastures.

R. *hirsútus* and *arvénsis,* in cornfields and waste places, the former not common in these parts (London).

R. *parviflóra* is rare. Cornfields and under hedges, about London; near Wandsworth—Mr. William Pamplin. Croydon, near Woodside; Chelmsford, &c.

TRO'LLIUS (Globe Flower).—See *Ranunculáceæ.*—Calyx five or many coloured sepals. Petals five or more. Fruit follicular, many-seeded.

T. *europæ'us.*—Sepals about fifteen, concave. Petals narrow.

Moist mountain pastures, North of England and Ireland. Common in gardens.

CA'LTHA (Marsh Marigold).—See *Ranunculáceæ,* p. 184.

C. *palústris.*—Marshes, common.

Var. β. Stem creeping. Leaves triangular, sharply crenate.

C. *radicans* not unfrequent in Scotland.

Class XIV.—DIDYNA'MIA.—(Four stamens, two longer than the other two.)

Order I.—GYMNO'SPERMIA.—(Seeds four, apparently uncovered).

The British Genera of this Order belong to the Family *Labiátæ.*—See pp. 132. 136.

ME'NTHA (Mint).—See p. 132.

M. *sylvéstris* and M. *rotundifólia.*—Moist waste ground.

M. *víridis* (Spear-Mint).—St. Ives, Cornwall.

M. *pipérita.*—Extensively cultivated about Mitcham, Surrey; Alford, Aberdeenshire—Dr. A. Murray.

M. *citráta.*—Leaves broadly oval or cordate, deeply serrated, acute, glabrous on both sides. Spikes capitate, very obtuse. Calyx and pedicels quite glabrous.

" Watery places, rare. Cheshire. Near Bedford."

M. *hirsúta.*—Common. M. *acutifólia* approaches *hirsúta.*

M. *rúbra.*—Wet places, in hedges, &c.

M. *géntilis.*—Flowers whorled. Leaves oval. Stem much branched, spreading. Flower stalks and base of the campanulate calyx nearly glabrous.

" Watery places, rare. Holt, Norfolk. River above Warrington."

M. *grácilis.*—Leaves lanceolate, nearly sessile. Stem much branched. Pedicels and base of calyx quite smooth.

Watery places, in moist meadows. Probably allied to the last—(Hooker).

M. *arvénsis.*—Fields, common.

M. *agréstis.*—Cornfields and neglected gardens, Somerset.

M. *pulégium.*—Margins of pools, on commons, not rare.

THY'MUS (Thyme).—See p. 133.

T. *serpy'llum.*—Hilly pastures, common.

ORI'GANUM (Marjoram).—See p. 134.

O. *vulgáre.*—On chalky banks, frequent.

TEU'CRIUM (Wood-Sage).—See p. 133.

T. *scorodónia.*—Woods and stony places, plentiful.

T. *scórdium.*—Leaves oblong, sessile, downy, serrated. Flowers few, axillary, pedicelled.

"Low wet meadows, rare. Cambridgeshire. Near Highbridge, Oxfordshire."

T. *chamæ'drys.*—Leaves oval, incised, serrated, tapering into a footstalk. Flowers axillary, in threes.

Borders of fields and mostly ruined walls. Winchelsea Castle. Walls, Norwich.

A'JUGA (Bugle).—See p. 133.

A. *réptans.*—Woods and pastures, plentiful.

A. *pyramidális.*—"Florescence in pyramidal and tetragonal spikes. Radical leaves oboval, large, crenate."

Highland pastures, rare. Ben Nevis; Burn of Killigour and Ord, Caithness.

A. *alpína.*—"Leaves nearly glabrous. Whorls of flowers rather distant."

Mountains, rare. Wales; Derbyshire; Durham; Aberdeenshire, not uncommon—D. Don.

A. *chamæ'pitys.*—In sandy and chalky fields, Surrey and Kent.

BALLO'TA (Horehound).—See p. 136.

B. *nígra.*—Waste places and hedges, common. White variety.

LEONU'RUS (Mother Wort).—Calyx five to ten-ribbed with five subulate teeth. Upper lip of corolla entire, very hairy above; lower trifid, horizontal. Anthers sprinkled with shining dots.

L. *cardiáca.*—Leaves petiolate. Lower three-lobed; upper entire.

Hedges and waste places, not common.

GALEO'BDOLON (Weasel Snout).—See p. 135.

G. *lúteum.*—Common in hedges in the South, rare in the North.

GALEO'PSIS (Hemp Nettle).—See p. 135.

G. *ládanum.*—Plentiful on chalky cornfields.

G. *villósa.*—"Leaves oval, lanceolate, serrated, soft, downy. Upper lip of corolla deeply notched."

Sandy cornfields, rare; Yorkshire, &c.

G. *tétrahit.*—Cornfields and hedges, not rare.

G. *versicolor.*—Cornfields. Plentifully in the fens, Lincoln.

LA'MIUM (Dead Nettle).—See pp. 134, 135.

L. *álbum.*—About hedges, plentiful. Rare in the East of Scotland.

L. *maculátum.*—Banks; naturalized near Bristol, and Bayswater, London.

L. *purpúreum.*—Fields, hedges, and rubbish, abundant.

L. *incisum.*—Sandy fields, not very common.

L. *amplexicaúle.*—Sandy fields, not rare.

BETO'NICA (Betony).—See p. 133.

B. *sylvática.*—Woods, common.

STA'CHYS (Wound Wort).—See p. 135.

S. *sylvática.*—Woods and hedges, common.

S. *ambigua.*—" Whorls of six flowers. Leaves oblong, cordate, acute, petiolate.

" Abundant in Scotland, especially in the Western Isles. Poynings, Sussex—Mr. Borrer."

S. *palústris.*—Moist banks, common.

S. *germánica.*—Whorls many-flowered. Leaves oblong, oval, crenate, densely silky. Stem woolly.

" Fields and hedges, chiefly on a limestone soil. Oxfordshire, Bedfordshire, Ducklington, Berks—Mr. Bicheno."

S. *arvénsis.*—Sandy fields, common.

S. *ánnua.*—" Field between Gad's Hill and Rochester."

NE'PETA (Catmint).—See p. 134.

N. *catária.*—" Hedges and waste places; not rare on chalky places."

GLECHO'MA (Ground Ivy).—See p. 133.

G. *hederácea.*—Hedges and waste places, common.

MARRU'BIUM (Horehound, White).—See p. 133.

M. *vulgáre.*—Waste places. " Rare in Scotland."

A'CINOS (Basil Thyme).—See pp. 133, 134.

A. *vulgáris.*—Frequent in chalky fields.

CALAMI'NTHA (Calamint).—See p. 134.

C. *officinális.*—Waysides, &c., in gravelly soils.

C. *népeta.*—Chalky soil; plentiful about waysides.

CLINOPO'DIUM (Wild Basil).—See p. 134.

C. *vulgáre.*—Roadsides, &c., not rare.

MELI'TTIS (Bastard Balm).—" Calyx campanulate, with branching veins, two-lipped; upper two to three-toothed. Corolla with the tube much exserted; upper lip nearly flat, entire; lower three-lobed, lobes rounded, nearly equal."

M. " *melissophy'llum.*—Leaves oblong, oval, slightly cordate.

" Var. *a.* Middle lobe of the lower lip purple, with a white margin.

" Var. *β.* Flowers mostly purple, lower lip spotted.

" Woods, copses, and hedges, in the South (Hampshire), and especially in the south-west of England."

PRUNE'LLA (Self-Heal).—See p. 136.

P. *vulgáris.*—Moist pastures, common.

SCUTELLA'RIA (Skull Cap).—See Appendix.

S. *galericuláta.*—Banks of rivers, &c. Turnham Green. Common about Albury Park, Surrey.

S. *minor.*—Not common. Leith Hill, Ashdown Forest, &c.

Order II.—ANGIOSPE'RMIA.—(Seeds in a capsule.)

BA'RTSIA (————).—See *Scrophularáceæ*, p. 129.

B. *alpina.*—Leaves opposite, cordate, oval, bluntly serrated. Flowers terminal, spicate, leafy.

" Alpine rocks rare. Near Orton, Westmoreland; Middleton Teesdale, on the Yorkshire and Durham sides of the river."

B. *viscósa.*—Leaves lanceolate, incised, serrate. Upper alternate. Flowers solitary, axillary, distant. Lower lip of corolla large, with two tubercles.

" Pastures, West of England and Wales; South-west of Scotland."

B. *odontítes.*—Wet places and cornfields, common.

EUPHRA'SIA (Eye-Bright).—See *Scrophularáceæ*, p. 130.

E. *officinális.*—Pastures, plentiful.

RHINA'NTHUS (Yellow Rattle).—See *Scrophularáceæ*, p. 129.

R. *crísta-gálli.*—Moist meadows, not rare.

R. *májor.*—" Cornfields North of England."

MELAMPY'RUM (Cow Wheat).—See *Scrophularáceæ*, p. 131.

M. *cristátum* (Crested ditto).—Woods, rare. Cambridgeshire, Northamptonshire; near Harringworth.

M. *arvénse.*—" Florescence spiked, oblong, lax. Bracts lanceolate, pinnatifid, with setaceous segments. Teeth of the calyx much longer than the tube. Lips of the corolla closed."

" Rare, cornfields and dry banks, chiefly near Norwich."

M. *praténse* (Yellow ditto).—Woods, common.

M. *sylváticum.*—Flowers unilateral, axillary. Leaves in distant pairs. Corolla scarcely twice as long as the calyx. Lips equal, slightly open.

Alpine woods, rare; North of England.

LATHRÆ'A (Tooth Wort).—See *Orobancháceæ*, p. 127.

L. *squamária.*—" Woods, rare; apparently parasitic on the roots of elms, hazels, and other trees."

PEDICULA'RIS (Marsh Rattle).—See *Scrophularáceæ*, p. 130.

P. *palústris.*—Wet places, not very common.

P. *sylvática.*—Woods and moors, common.

ANTIRRHI'NUM (Snap-Dragon).—See *Scrophularáceæ*, p. 130.

A. *május.*—Old walls, not uncommon.

A. *oróntium.*—Sandy fields, not very common.

LINA'RIA (Toad-Flax).—See *Scrophularáceæ*, p. 130.

L. *cymbalária.*—On old walls, not rare.

L. *spúria* and L. *elátine* are common in cornfields, Surrey and Kent.

L. *répens.*—Near the chalk; about Southampton—Mr. Wm. Pamplin.

L. *vulgáris.*—Common in fields and hedges, &c.

I have never met with the var. *Pelória* with five spurs, and five imperfect stamens, though it is said to be " not very uncommon."

SCROPHULA'RIA (Fig Wort).—See *Scrophularáceæ*, p. 130.

S. *nodósa* and *aquática* are common, the former in dry and moist places, the latter near water.

S. *scorodónia.*—" Downy. Leaves cordate, triangular, with large double serratures. Panicles leafy.

" In the extreme South and South-west of England."

S. *vernális.*—Not common. Essex; near Hemsted, Norfolk, &c.

DIGITA'LIS (Fox-Glove).—See *Scrophularáceæ*, p. 130.

D. *purpúrea.*—" The Rev. G. Munford informs me that it is abundant about Lynn, Norfolk. It is stated in the English Flora to be rare in Norfolk and Suffolk."

LIMOSE'LLA (Mud Wort).—See *Scrophularáceæ*, p. 129.

L. *aquática.*—Muddy places, rare.

SIBTHO'RPIA (————).—See *Scrophularáceæ.*—" Calyx in five deep spreading segments. Corolla five-cleft, rotate. The two lower segments the narrowest. Stigma dilated. Capsule nearly round, compressed, two-celled."

S. *europæ'a.*—Stem filiform, creeping. Leaves round, broadly crenated.

" Moist shady places; Devon, Cornwall, Scilly Isles; near Nettlecombe, Somerset; Jersey, &c.

VERBE'NA (Vervain).—See *Verbenáceæ*, p. 136.

V. *officinális*.—Not rare about roadsides, &c.

LINNÆ'A (————).—See *Caprifoliáceæ*.—Calyx five-cleft, superior. Corolla campanulate, five-cleft, equal. Fruit a dry three-celled berry, with one cell only, bearing one perfect seed. Involucre of four leaves.

L. *boreális*.—" Stems trailing, filiform, branching. Peduncles long erect, two flowered.

> " This is the plant selected by Linnæus to transmit his name to posterity."
>
> Perthshire, Inverness and Aberdeenshires; Kingussie, seven miles from Aberdeen, &c.

OROBA'NCHE (Broom Rape).—See *Orobancháceæ*, p. 127.

O. *májor*.—On broom and furze, not rare.

O. *caryophylláceæ*.—This species differs chiefly from O. *májor* in the hairy stamens, dark purplish stigma, and in the obtuse wavy lobes of the lower lip.

> Discovered by the Rev. G. E. Smith, and described and figured by him in Plants of South Kent.

O. *elátior* and *mínor* grow in clover fields and bushy places in Surrey, Norfolk, &c.

O. *rúbra*.—" Stem simple. Corolla tubular. Upper lip two-lobed; lower in three equal obtuse lobes. Stamens partially glandulous and hairy. Style glabrous.

> " On basalt and trap rocks, Hebrides; near Kirkaldy."

O. *cærúlea*.—" Bracts three. Under lip of corolla cloven and notched; lower in three equal entire segments. Style downy."

> Grassy pastures, near the sea, rare.

O. *ramósa*.—Stem branched.

> On hemp roots, chiefly in Norfolk and Suffolk. Sark Isle—W. C. Trevelyan, Esq.

CLASS XV.—TETRADYNA'MIA.—(Six stamens, four long, two short.)

This Class comprehends all the British *Cruciferous* genera.

Order I.—SILICULO'SA.—(Fruit a short pod or pouch.)

CAKI'LE (Sea Rocket).—" Pouch angular, of two one-seeded indehiscent joints; the upper joint deciduous, bearing an upright sessile seed; the lower (sometimes abortive) pendulous."

C. *marítima*.—" Joints of the pouch two-edged, the upper with two teeth at the base. Leaves fleshy, pinnatifid, somewhat toothed."

> Sea shores, frequent. Near Folkestone Harbour—The Rev. G. E. Smith.

CRA'MBE (Kale).—Pouch two-jointed; lower abortive; upper bearing an inverted seed on a podosperm.

C. *marítima* (Sea Kale).—Leaves roundish, sinuated. Stem glabrous. When cultivated it becomes an excellent esculent.

> Lydden Spout, Eastwear Bay, Dover—Rev. G. E. Smith.

CORO'NOPUS (See *Senebiéra*) (Swine's Cress).—See p. 163.

C. *ruéllii*.—Common in England, rare in Scotland.

C. *dídyma*.—Waste ground, near the sea, South and South-west of England.

ISA'TIS (Woad).—See p. 162.

I. *tinctória.*—" Cultivated fields; scarcely indigenous? About Ely, Durham, &c."

VE'LLA (Cress Rocket).—Pouch swollen, with a dilated flat winged style, twice as long as the valves (of the pouch).

V. *ánnua.*—" Leaves bipinnatifid. Fruit pendulous."

In cornfields, rare.

THLA'SPI (Penny Cress).—See p. 162.

T. *arvénse.*—Fields, not common. Essex; Merstham, Surrey; Gayton, near Lynn—Rev. George Munford.

T. *perfoliátum.*—Cauline leaves cordate, glabrous.

" Limestone pastures, very rare. Stone pits, Burford, Oxfordshire."

T. *alpéstre.*—" Pouch oboval. Cells four to six-seeded. Cauline leaves cordate, sagittate. Stem simple."

" Derbyshire and Yorkshire. Limestone pastures."

CAPSE'LLA (Shepherd's Purse).—See p. 162.

C. *búrsa-pastóris.*—Everywhere.

HUTCHI'NSIA (————).—See p. 162.

H. *petræ'a.*—On limestone rocks in several places in the West of England.

TEESDA'LIA (————).—See p. 162.

T. *nudicáulis.*—Heaths, in several places.

IBE'RIS (Candy Tuft).—See p. 162.

I. *amára.*—Chalky fields, rare. Oxfordshire and Berks.

LEPI'DIUM (Pepper Wort).—See pp. 162, 163.

L. *latifólium.*—On banks near the sea. Salt marshes, Essex.

L. *drába.*—" Leaves amplexicaule, broadly oblong or lanceolate, entire or toothed. Pouch cordate, entire at the apex, crowned with a persisting style about its own length."

Fields and hedges, rare. Swansea; Ramsgate—Rev. J. Berkeley.

L. *ruderále.*—Waste places and rubbish, near the sea. Marshes south of Lynn—The Rev. George Munford.

L. *campéstre.*—Fields, not rare.

L. *smithii.*—Fields and hedges, in Norfolk, Suffolk, about Southampton and Portsmouth.—Mr. William Pamplin.

COCHLEA'RIA (Scurvy-Grass).—See pp. 162, 163.

C. *officinális.*—Muddy sea shores.

C. *grœnlándica.*—" Pouch globose. Leaves kidney-shaped or cordate, fleshy, entire; uppermost oblong."

" Sea shores and Highland mountains."

C. *anglica.*—Muddy and rocky sea-shores, frequent.

C. *dánica.*—Pouch ovate, elliptic. Leaves all petiolate, nearly deltoid.

Stony and muddy sea-shores.

C. *armorácia* (Horse Radish).—Not rare in several places; near rivers, as the Rhoding in Essex, &c.

SUBULA'RIA (Awl Wort).—" Pouch oval, pointless, many-seeded. Valves inflated (turgid)."

" Shallow margins of Alpine lakes, frequent."

S. *aquática.*—" Leaves few, radical, awl-shaped, one to three inches. Scape two to four inches. Pouch approaching that of *Drába*, but with more turgid valves."

DRA'BA (Whitlow-Grass).—" Pouch entire, oval or oblong. Valves flat or slightly convex. Cells many-seeded."

D. *vérna* (Vernal ditto).—" On walls and dry places, common."
" Var. β. Pouch swollen. On Ben Lawers."

D. *aizoídes*.—" Scapes glabrous. Petals slightly notched, twice as long as the calyx. Pouch with a long style. Leaves lanceolate, rigid, glossy, keeled, and ciliated. Flowers bright yellow."
Near Swansea, South Wales.

D. *rupéstris*.—Scape rarely with one leaf. Pouch tipped with a very short style. Leaves flat, lanceolate, hairy.
Rare. Ben Lawers and Cairngorum, Ben Hope—Mr. M'Nab.

D. *incúrva*.—" Cauline leaves lanceolate, toothed, hoary, with starry pubescence. Pouch oblong, somewhat twisted.
" Mountain rocks, more frequent than *rupéstris*, Wales, north of England and Scotland."

D. *murális*.—" Stem branched. Leaves oval, obtuse, amplexicaule toothed. Pouch glabrous."
" Limestone mountainous countries; on rocks and walls; Wardon hills, Bedfordshire; Emborough, Somerset."

CAMELI'NA (Gold of Pleasure).—" Pouch suboval, many-seeded. Valves inflated."

C. *satíva*.—" Leaves lanceolate, sagittate."
Fields. Lincolnshire, near Spittal.

KO'NIGA (Alyssum).—See p. 161.

K. *marítima*.—Cliffs, by the sea; near Aberdeen.
Occasionally in shrubberies, and on rubbish near gardens.

Order II.—SILI'QUOSA.—(Fruit a long pod.)

DENTA'RIA (Coral Root).—Pod narrow, lanceolate, tapering, with flat valves, which generally open elastically.

D. *bulbífera*.—Stem simple. Lower leaves pinnated; upper simple, with axillary bulbs.
Woods, Harefield, Middlesex.

CARDAMI'NE (Bitter Cress).—See p. 164.

C. *amára*.—Near rivulets, not common. Plentiful about Albury.

C. *praténsis*.—Moist meadows, common.

C. *impátiens*.—" Leaves pinnate, with lanceolate leaflets. Petals linear or wanting. Valves very elastic."
Matlock rocks; High Torr, Derbyshire, rare.

C. *hirsúta*.—Moist places, and in sandy lanes and on walls, not rare.

C. *bellidifólia*.—" Leaves simple, oval, on long petioles.
"Scotland, (Mr. Milne, in Withering). Clare, Ireland. A doubtful native."

A'RABIS (Rock Cress).—See p. 164.

A. *stricta* (Upright ditto).—" Leaves toothed, obtuse, hispid. Stems hairy. Petals and pods erect.
" St. Vincent's Rocks, Bristol."

A. *petræ'a* (Alpine ditto).—" Radical leaves lyrate, pinnatifid, petiolate, cauline entire. Pods spreading, twice as long as the pedicels."
Alpine rocks, North Wales. Highland mountains, North and West.

A. *ciliáta.*—Leaves oval, glabrous, ciliated, radical nearly sessile; cauline sub-amplexicaule. Stem simple.

Near Loch Lea, Glen Esk, Scotland—Mr. G. Don.

A. *hirsúta* (Hairy ditto).—See *Turrítis hirsúta.*—Chalky banks, rare.

A. *turríta.*—"Leaves amplexicaule. Pods recurved, flat, linear, with thickened margins. Bracts leafy."

"On the walls of Trinity and St. John's Colleges, Cambridge; Magdalen College, Oxford."

TURRI'TIS (Tower Mustard).—See p. 164.

T. *glábra.*—Banks and waysides, not common; Suffolk and Norfolk; about Colchester; Albury and Shere.

BARBARE'A (Winter Cress).—See pp. 162, 163.

B. *vulgáris.*—About hedges, common.

B. *præ'cox.*—"Waste places, Devon."

NASTU'RTIUM (Cress).—See p. 163.

N. *officinále* (Water-Cress).—Running water, frequent.

N. *sylvéstre.*—Watersides, not common.

N. *terréstre.*—On moist rubbishy parts, not rare.

N. *amphíbium.*—Watery places, frequent.

SISY'MBRIUM (Hedge Mustard).—See p. 163.

S. *officinále.*—Roadsides, very common.

S. *írio.*—Waste ground, chiefly about London. Rare.

S. *sophía.*—Not rare about Colchester and in Northamptonshire.

S. *thaliánum.*—See *Arabis thaliána*, p. 164.—Walls and dry banks, frequent.

ERY'SIMUM (Treacle Mustard).—See p. 164.

E. *cheiranthoídes.*—Waste places, not common. Hardwick, near Lynn—The Rev. G. Munford.

E. *alliária.*—See *Alliária*, p. 164.—Hedges, frequent.

E. *orientále.*—"Leaves cordate, amplexicaule. Radical oboval; all glabrous, glaucous, and entire."

Fields and cliffs near the sea; Sussex, &c.

CHEIRA'NTHUS (Wall-Flower).—See p. 163.

C. *cheíri.*—Old walls, not rare.

MATTHI'OLA (Stock).—"Pod crowned with the connivent two-lobed stigma. Calyx erect, longer filaments dilated."

M. *incána.*—Stem shrubby, upright, branched. Leaves lanceolate, entire. Pods cylindric.

"Cliffs east of Hastings, not wild."

M. *sinuáta.*—"Stem herbaceous, spreading. Leaves downy; lower sinuated. Pods compressed, muricated."

"Sandy shores of Wales and Cornwall."

HE'SPERIS (Lady's Violet).—See pp. 164, 165.

H. *matronális.*—Hilly pastures; near Colchester; Crich, Derbyshire. A doubtful native.

BRA'SSICA (Cabbage Turnep).—See p. 165.

B. *nápus* (Rape, or Cole-Seed).—About fields, not rare.

B. *rápa* (Turnep).—Fields.

B. *olerácea.*—Root cylindric, fleshy. Leaves all glabrous, glaucous, sinuated and lobed.

Cliffs by the sea, Dover, Devon, &c. At the foot of the chalk, Lydden Spout—Rev. G. E. Smith.

B. *monénsis.*—“ Leaves pinnatifid. Stem nearly leafless, glabrous. Pods smooth, one to three-seeded.

“ On the isles and shores of the Clyde. In Lorn.”

B. *campéstris.*—Sides of rivers, &c., not uncommon.

SINA'PIS (Mustard).—See p. 165.

S. *arvénsis.*—Cornfields, a too common weed.

S. *álba.*—Cornfields and waste places.

S. *nígra* (Common Mustard).—Under hedges and in waste places.

S. *tenuifólia.*—“ On old walls and rubbish in and near towns in the South and South-east, as Norwich, London, Bristol.”

S. *murális.*—“ Pods linear, glabrous, with a short beak, erect. Peduncles spreading. Leaves sinuate, glabrous. Stem hairy.

“ Sandy barren fields, near the sea, in the South and South-west. Isle of Thanet; Bristol; Dunfermline—Dr. Dewar.”

RA'PHANUS (Radish).—See p. 165.

R. *raphanístrum.*—Cornfields, common.

R. *marítimus.*—“ Leaves lyrate. Pods of one cell, jointed, striated.

“ Beachy Head, Sussex; Jersey and Guernsey.”

CLASS XVI.—MONADE'LPHIA.—(Filaments [stamens] united.)

Order I.—PENTA'NDRIA.—(Five stamens).

ERO'DIUM (Stork's Bill).—See *Geraniáceæ*, pp. 172, 173.

E. *cicutárium.*—Sandy waste ground, common.

E. *moschátum.*—Rare. Craven, Yorkshire; Shotover Hill, Oxfordshire; Ampthill Warren, Bedfordshire.

E. *marítimum.*—Sandy and gravelly sea-coasts, but rare. Sussex, Wales, and Cornwall.

Order II.—DECA'NDRIA.—(Ten styles.)

GERA'NIUM (Crane's Bill).—See *Geraniáceæ*, p. 172.

G. *sanguíneum.*—Alpine or limestone pastures, Derbyshire.

G. *phæ'um.*—“ Peduncles two-flowered, opposite. Calyx slightly awned. Petals waved. Capsules keeled, hairy below, wrinkled above. Stem erect. Flowers deep purple, almost black.”

Sir J. E. Smith considers it to be, perhaps, most truly wild in the mountainous parts of Yorkshire.

G. *nodósum.*—“ Peduncles two-flowered. Leaves opposite, three to five lobed, pointed, serrated. Capsules even, downy all over.”

“ Said to have been found in the mountainous parts of Cumberland, and between Hatfield and Welwyn, Herts; but I have never seen British specimens”—(Hooker).

G. *sylváticum.*—“ Peduncles two-flowered. Leaves subpeltate, with five to seven deep and acute lobes, which are cut and serrated. Stem erect, corymbous. Petals slightly notched. Stamens fringed. Capsules hairy, not wrinkled.

“ Woods and thickets in sub-alpine countries.”

G. *praténse.*—Pastures and moist thickets, chiefly in mountainous countries. Woods of Ury, Kincardineshire.

G. *pyrenáicum.*—Meadows and banks, not common.

G. *lúcidum.*—Not rare under hedges in Surrey and Bucks. “ Rocks, walls, &c., especially in mountainous parts.”

G. *robertiánum* is very common under hedges, &c.

G. *mólle*.—Fields and waste places. G. *rotúndifolium* not so common, but in similar localities. G. *pusíllum* and G. *disséctum* are both common in waste gravelly places.

G. *columbínum* is common only on the chalk, rare on gravel.

Order III.—POLYA'NDRIA.—(Styles indefinite.)

LAVATE'RA (Tree Mallow).—See *Malváceæ*, p. 181.—Calyx double, outer three-lobed. Capsules numerous, one-seeded.

L. *arbórea*.—"Arborescent leaves with about seven angles, plaited, downy. Peduncles axillary, clustered, one-flowered."

"Maritime inundated rocks, South and West of England; Anglesea."

MA'LVA (Mallow).—See *Malváceæ*, p. 181.

M. *sylvéstris* and M. *rotundifólia* are common about roadsides.

M. *moscháta*.—Not rare in pastures and meadows.

ALTHÆ'A (Marsh Mallow).—See *Malváceæ*, p. 181.

A. *officinális*.—Salt marshes, not rare. A. *hirsúta*.—Fields and waste places, rare; between Cobham and Cuxton, Kent—The Rev. Professor Henslow.

CLASS XVII.—DIADE'LPHIA.—(Filaments united in two parcels.)

Order I.—HEXA'NDRIA.—(Six styles.)

CORYDA'LIS (————).—See *Fumariáceæ*, p. 174.

C. *sólida*.—"Stem simple, erect. Leaves biternate. Leaflets cuneate or oblong, incised. Root solid."

"A doubtful native. Groves and thickets, Wickham, Hants."

C. *lútea*.—Not rare on old walls in several places. "Castleton, Fountain's Abbey, Yorkshire."

C. *claviculáta*.—Not rare in woods and on gravelly wastes. "Abundant on walls and roofs in the Highlands."

FUMA'RIA (Fumitory).—See *Fumariáceæ*, p. 174.

F. *capreoláta*.—Cornfields and gardens.

F. *officinális* with Var. β., and F. *parviflóra*, in cornfields, the last rare.

Order II.—OCTA'NDRIA.—(Eight styles).

POLY'GALA (Milk Wort).—See *Polygaláceæ*, p. 174.

P. *vulgáris*.—Pastures on uplands, especially on chalk.

Order III.—DECA'NDRIA.—(Ten styles.)

U'LEX (Furze).—See *Leguminάceæ*, p. 177.

U. *europæ'us*.—Heathy places, common. "Rare in the Highlands."

U. *nánus*,—On upland heaths, not rare.

The furze is unknown as a native of Sweden.

GENI'STA (Green-Weed).—See *Leguminάceæ*, p. 176.

G. *tinctória* (Dyers' ditto).—Pastures, not very common.

G. *pilósa*.—"Procumbent. Leaves silky below. Flowers axillary, on short pedicels. Legumes downy."

"Dry sandy heaths, near Bury; Lizard, Cornwall."

G. *ánglica* (Petty Whin).—Heaths, not uncommon.

CY'TISUS (Cytisus, or, Broom).—See *Leguminάceæ*, p. 176.

C. *scopárius* (*Genista scoparia*) (Common Broom).—Frequent on dry hills, &c.

ONO'NIS (Rest Harrow).—See *Leguminácecæ*, p. 177.

O. *arvénsis*, with Var. β.—Pastures, &c.

ANTHY'LLIS (Kidney Vetch, or, Lady's Finger).—See *Leguminácecæ*, p. 179.

A. *vulnerária*.—Pastures, especially on chalk.

O'ROBUS (Bitter Vetch).—See *Leguminácecæ*, p. 175.

O. *tuberósus*.—Woods, not rare on hills. Common in Scotland.

O. *níger*.—" Leaves pinnate, with three to six oval or elliptic pairs of leaflets. Stipules linear, lanceolate, acute. Stem branched, angular, erect."

" Den of Airly, Forfarshire; Craiganain, a rock within two miles of Moyhouse, Inverness-shire—Dr. MacLachlan."

O. *sylváticus*.—" Leaves hairy, with seven to ten pairs of oval, oblong, acute, leaflets. Stipules half arrow-shaped. Stem decumbent, hairy."

" North of England, in mountainous woods. Lowlands of Scotland."

LA'THYRUS (Vetchling and Everlasting Pea).—See *Leguminácecæ*, p. 175.

L. *áphaca*.—" Rare. Fields in Norfolk, Cambridge, and Oxford."

L. *nissólia*.—Bushy places and borders of fields, not common.

L. *hirsúta*.—" Peduncles two-flowered, each tendril with a pair of linear, lanceolate leaflets. Legumes hairy. Seeds rough. Stem winged."

Rare. " Fields in Essex. Between Bath and Bristol."

L. *praténsis*.—Hedges and moist places, common.

L. *sylvéstris*.—Woods in the middle and south of England. Northamptonshire; near Brigstock. Milton woods.

L. *latifólia*.—" Woods, rare. Outcast of gardens? Cambridgeshire, Cumberland, &c. Near Stapleton, Gloucestershire, in an old quarry, apparently wild—William Christy, Esq."

L. *palústris*.—" Peduncles three to six-flowered. Tendrils with two to four pairs of linear, lanceolate leaflets. Stipules half arrow-shaped, lanceolate. Stem winged."

" Boggy meadows and thickets. Near London; in Berks, Leicestershire, Lancashire, and Yorkshire."

L. *pisifórmis*.—" Peduncles many-flowered, shorter than the leaves. Tendrils with three to four pairs of oval leaflets. Stipules large, unequally cordate. Hastate, with acute angles."

" Pebbly beach of Lincolnshire, Suffolk, and the South coast. Near Walmer Castle—Mr. William Hutchinson; Rev. G. E. Smith. Near Lydd, ditto."

VI'CIA (Vetch).—See *Leguminácecæ*, p. 175.

V. *sylvática*. — " Peduncles many-flowered, longer than the leaves. Leaflets elliptic, oblong, mucronate. Stipules lunate, deeply toothed."

" Bushy places in mountainous countries; in the north of England, Wales, and Scotland. Near Newmarket. Oxfordshire."

V. *crácca*.—In bushy places, not uncommon.

V. *satíva*.—In sandy wastes and cultivated grounds, common.

V. *angustifólia*.—In dry pastures and woods.

V. *lathyroídes*—Dry pastures, not common.

V. *lútea.*—"Flowers solitary, sessile. Legumes hairy. Stems spreading. Stipules coloured."

"Rocky or stony ground, especially near the sea. Suffolk; Sussex; on Glastonbury, Torhill; between Montrose and Arbroath; and hills at Queensferry—G. Don."

V. *hy'brida.*—Similar to *lútea,* but distinguished by the hairy standard (vexillum) of the corolla.

Glastonbury, Torhill—Ray. Swanpool, near Lincoln — Mr. Nicholson.

V. *lævigáta.*—"Flowers solitary, sessile. Legumes reflexed, glabrous. Stipules cloven. Leaflets bluntish."

"On the pebbly shore of Weymouth; allied to the two last in its herbage."

V. *sépium.*—Hedges, common.

V. *bithy'nica.*—"Flowers pedunculate, mostly solitary. Legumes upright, rough. Petioles with two pairs of lanceolate leaflets. Stipules toothed."

"Bushy places, in a gravelly soil, mostly near the sea, but rare. Dorsetshire and Hants; Frindsbury, Kent—Rev. Professor Henslow."

E'RVUM (Tare).—See *Leguminácea,* p. 176.

E. *hirsútum* and E. *tetraspérmum* grow in cornfields and waste places.

ASTRA'GALUS (Milk Vetch).—See *Leguminácea,* p. 176.

A. *glycyphy'llus.*—Woods, not rare in chalky countries; Masham, Norfolk—The Rev. G. Munford.

A. *hypoglóttis.*—"Dry gravelly or chalky pastures." East of England and Scotland.

A. *alpínus.*—"Pubescent. Stem ascending. Leaflets elliptical. Stipules oval, free. Legumes elliptic, stipitate, pendulous, clothed with black hairs."

"Head of the glen of the Dole, Clova—Dr. Graham and others. A new addition to the British Flora."

OXY'TROPUS (————).—"Keel of the corolla with a narrow point. Cells formed by the inflexed margin of the upper suture." By these two characteristics it is distinguished from *Astrágalus.*

O. *uralénsis.*—"Scape longer than the leaves. Legumes erect, ovate, cylindric, inflated, pubescent. Style persisting."

Dry mountain pastures, in Scotland; Queensferry, Montrose—Dr. A. Murray.

O. *campéstris.*—"Scape about as long as the leaves. Legumes ovate."

"Rocks facing the South, a little to the north of Bradooney, in the Clova mountains—G. Don."

ORNI'THOPUS (Bird's Foot).—See *Leguminácea,* p. 176.

O. *perpusíllus.*—Sandy and gravelly soils, not rare. "Rare in Scotland."

HIPPOCRE'PIS (Horse-shoe Vetch).—See *Leguminácea,* p. 176.

H. *comósa.*—Common on chalky pastures.

ONO'BRYCHIS (*Hedy'sarum onóbrychis*) (Saintfoin).—See *Leguminácea,* p. 176.

O. *sativa.*—Chalky hills, &c.

MELILO'TUS (Melilot).—See *Leguminácea,* p. 178.

M. *officinális.*—Bushy places, not very common.

M. *leucántha.*—"Denes, Yarmouth. Near Warrington."

TRIFO'LIUM (Trefoil, or Clover).—See *Leguminάceæ*, pp. 177, 178.

T. *ornithopodioídes*.—Dry sandy pastures, but not very general. Mostly on the East coast. About Edinburgh.

T. *répens*.—Common in pastures, &c.

T. *subterrάneum*.—Dry gravelly and sandy places, not common.

T. *ochroléucum*.—" Heads terminal, solitary. Lower calyx-tooth thrice as long as the rest. Leaflets of the lower leaves cordate."

" Pastures, on a gravelly or chalky soil; also in the clayey soil of Norfolk and Suffolk."

T. *praténse* and T. *medium* in pastures, the latter not very common.

T. *marítimum*, T. *stellάtum*, and T. *suffocάtum*, on the sea-shore, the latter rare; and *stellάtum*, a doubtful native. T. *suffocάtum*.—Hardwick, Lynn—The Rev. G. Munford.

T. *arvénse*, T. *striάtum*, and T. *glomerάtum*: in dry sandy gravelly places.

T. *scάbrum*.—On chalk and gravel, not common.

T. *fragíferum*.—In wet waste places, rather rare.

T. *resupinάtum*.—" Heads hemispherical, at length globose, on stalks at first only about as long as the petiole. Corollas resupinate. Calyx, after flowering, membranous, reticulated, inflated, hairy, acute. Leaflets oboval. Stem prostrate."

" Meadows, near Bristol. Recently added to the British Flora."

T. *procúmbens* and T. *filifórme* on dry pastures and roadsides, common.

LO'TUS (Bird's Foot Trefoil).—See *Leguminάceæ*, pp. 178, 179.

L. *corniculάta*.—Pastures, very common.

" Var. β. *Villósa*, clothed with very long spreading hairs."

L. *ténuis*.—Heads depressed, umbellate, six to ten flowered. Stems prostrate, slender. Leaflets lanceolate. Peduncles very long. Claw of the standard inflated above.

Dry and waste places.

L. *mάjor*.—Moist bushy parts, not rare.

L. *angustíssima*.—" Hairy. Flowers solitary, in pairs, or three to four in a head, with a peduncle twice as long as the leaves. Leaflets oval, lanceolate. Calyx teeth very long. Stems procumbent. Legumes very slender.

South of England, very rare. Hastings; Sussex; Kingsteignton and Bishopsteignton, Devon. α, *minor*—Heads one to two flowered. β, *mάjor*—Heads three to four-flowered. Peduncles elongated. β, Cornwall, near the Lizard and Penzance."

MEDICA'GO (Medic.)—See *Leguminάceæ*, p. 179.

M. *falcάta*.—Pastures, &c.

M. *sativa*.—" Gravelly banks and pastures, not wild"—(Hooker).

M. *lupulina*.—In fields. M. *maculάte*.—Gravelly pastures.

M. *muricάta*.—" Legumes closely spiral, sub-globose; the spires keeled at the margin and fringed with a close double row of short curved spines."

" On the sea bank. Orford, Suffolk—Ray."

M. *minima*.—" Sandy fields, rare. Narburgh, Norfolk; and near Newmarket."

M. *denticulάta*.—" Near Weymouth; Cley, Norfolk."

CLASS XVIII.—POLYA'DELPHIA.—(Stamens in more than two parcels.)

Order I.—POLYA'NDRIA.—(Stamens indefinite).

HYPE'RICUM (St. John's Wort).—See *Hypericáceæ*, pp. 179, 180.
H. *calycínum*.—Shrubberies, not wild.
H. *androsæ'mum* (Tutsan).—" Rare. Ashridge, Herts; Great Marlow, Bucks."
H. *quadrángulum*.—Not rare in boggy places.
H. *perforátum*.—Woods and hedges, common.
H. *dúbium*.—" Styles three. Leaves elliptic, oval, obtuse, destitute of pellucid dots. Calyx segments elliptic."
" Rather mountainous woods, not plentiful."
H. *humifúsum*.—Moist pastures.
H. *montánum*.—Frequent on calcareous soils.
H. *barbátum*.—" Styles three. Corymbs terminal. Calyx fringed with long stalked glands. Stem erect, rounded. Leaves oval, with black scattered dots beneath."
" Side of a hedge, near Aberdalgy, Perthshire—Mr. G. Don."
H. *hirsútum*.—Hedges. H. *púlchrum*.—Heaths, common.
H. *elódes*.—Spungy bogs, not rare.

CLASS XIX.—SYNGENE'SIA.—(Anthers adherent).

Order I.—ÆQUA'LIS.—(All the florets equal.)

TRAGOPO'GON (Goat's Beard).—See *Compositæ*, p. 150.
T. *praténsis*.—Meadows and borders of fields, not rare.
T. *májor*.—Involucre half as long again as the yellow corollas. Leaves glabrous, acuminated, channelled. Peduncles thickened upwards.
Glebe of Eccles, and fields near Eccles. Banks of the Tweed, at Bingham, by Coldstream—Dr. Johnston.
T. *porrifólius*.—Involucre much longer than the florets. Peduncles thickened upwards. Flowers purple.
Moist meadows in several parts of England, but very local.
HELMI'NTHIA (Ox-Tongue).—See *Compositæ*, p. 150.
H. *echioides* (*Picris echioides*).—Borders of fields, chiefly in a clayey soil. " Not found in Scotland."
PI'CRIS (Picris, or Ox-Tongue).—See *Compositæ*, p. 150.
P. *hieracioides*.—Roadsides, not very common.
SO'NCHUS (Sow Thistle).—See *Compositæ*, p. 150.
S. *alpínus*.—Flower stalks, bracts, and involucre glandulous, hispid, racemous. Stems glabrous below. Leaves lyrate, sagittate at the base, with a large terminal lobe.
Loch-na-garr and Clova mountains—G. Don.
S. *palústris*.—Marshy places, rare. " Croydon—J. S. Mills, Esq. Isle of Ely."
S. *arvénsis* and S. *oleráceous*.—Cornfields and waste places.
LACTU'CA (Lettuce)).—See *Compositæ*, p. 150.
L. *virósa*.—Banks. " Edinburgh, Dunkeld, Melrose, &c."
L. *scaríola*.—Waste ground, Cambridgeshire; Southend, Essex.

L. *saligna.*—Root leaves lanceolate, with few teeth. Cauline linear, lanceolate, sagittate, entire. Flowers lateral, with small floral leaves.

Chalky waste ground, near salt marshes, in the South-east of England.

PRENA'NTHES (Wall Lettuce).—See *Compositæ*, p. 150.

P. *murális.*—On walls and in woods, &c., not uncommon.

P. *hieraciifólia.*—" Radical leaves oboval, oblong. Cauline sagittate. Amplexicaule downy."

" Crumbling rocks, on the hill of Turin, near Forfar."

LEO'NTODON (Dandelion).—See *Compositæ*, pp. 150, 151.

L. *taráxacum.*—Meadows and pastures, common.

L. *palústre.*—Wet pastures, Cambridgeshire and Norfolk. " Frequent in Scotland, on wet moors, where it may be seen gradually passing into L. *taráxacum.*"

APA'RGIA (Hawk-Bit).—See *Compositæ*, p. 151.

A. *híspida.*—" Meadows and chalky pastures, common."

A. *taráxaci.*—" Scapes thickened above, hairy, and mostly single-flowered. Leaves runcinate, glabrous. Involucre hairy."

" Mountains of Wales, Scotland, and Ireland."

A. *autumnális.*—" Pastures, common."

THRI'NCIA (————).—See *Compositæ*, p. 151.

T. *hírta* (*Apárgia hirta*).—Pastures and moors, abundant.

HIERA'CIUM (Hawk Weed).—See *Compositæ*, p. 151, 152.

H. *alpínum.*—Scape single-flowered, leafless, hairy. Involucre clothed with long silky hairs.

" Snowdon ; Craig Breddin, Montgomeryshire."

H. *halléri.*—Scape one-flowered, with one, rarely two leaves, hairy. Root leaves oblong, stipulate. Involucre with long and silky hairs.

Sir William J. Hooker considers it a luxuriant state, or Var. of H. *alpínum.*

" Highland mountains."

H. *pilosélla.*—Dry pastures, common.

H. *dúbium.*—Stem many-flowered, leafless, or with one small leaf. Leaves entire, elliptic, lanceolate, with only a few scattered hairs. Scyons creeping.

" Mountainous countries, rare. Said to have been found in Westmoreland and Scotland."

H. *aurantíacum.*—" Stem nearly leafless, simple, hairy, bearing a corymb of many flowers. Leaves rough, with longish hairs.

" Woods in Banffshire, and near Turriff; Coalston Woods, East Lothian; Failsworth, near Manchester. A very dubious native"—(Hooker). Common in gardens.

H. *auricula.*—" Leaves lanceolate, acute, very entire, coarsely hairy, and green on both sides. Stem downy, hairy, corymbous.

" Dale Head, near Grassmere, Cumberland—Hudson."

H. *lawsóni.*—" Stem branching, with one to two sessile leaves. Involucres with hairs black at the base, and mixed with black pedunculated glands."

" Var. *a.* Leaves on short petioles. *β.* Leaves broadly oval, lanceolate, on long petioles."

" Mountains of Westmoreland, Wales, and Scotland."

H. *pulmonárium.*—" Stem two to six-flowered, one to two-leaved. Root leaves oval, lanceolate, sinuate, toothed, lengthened into a petiole. By this last mark it is distinguished from H. *lawsóni.*"

" Rocky places in the mountainous valleys of Scotland."

H. *murórum.*—Woods, walls, rocks; common.

" Perhaps the three species of this section ought to be considered varieties of each other"—(Hooker.)

H. *sylváticum.*—Mountain woods, &c., common.

" Var. β. Leaves spotted with dark purple. Teeth large (H. *maculátum*)."

" Var. γ. Leaves lanceolate, spotted and clouded with purple (H. *pictum*)."

H. *paludósum.* — " Glabrous. Stem fistulous. Leaves amplexicaule, cordate."

" Moist woods, north of England, Wales, and Scotland."

H. *mólle.*—Stem tubular, leafy, downy, corymbous. Leaves slightly toothed, hairy, amplexicaule. Distinguished by its obtuse root leaves tapering into a long petiole.

Forfar, at the falls of the Tummel, and in Glen-Luss, &c.

H. *cerinthoídes.*—" Leaves hairy, very slightly toothed; radical oblong, oval; cauline oblong, semi-amplexicaule. Involucre hairy."

" Rocks, Highlands."

H. *amplexicáule.*—Hairy, glandulous. Cauline leaves cordate at the base, amplexicaule. Distinct by its brownish glandular hairs.

Walls of the Castle of Cleish, Kinross-shire—Mr. Arnott. Clova mountains—Mr. G. Don. Walls of the Oxford garden.

H. *denticulátum.*—" Stem erect, leafy, solid, many-flowered. Cymous with downy glandular stalks. Leaves sessile, elliptic, lanceolate, finely toothed, nearly glabrous; glaucous beneath."

" Woods at Loch Rannoch, Perthshire. Near Findhorn, Elgin."

H. *prenanthoídes.*—Stem erect, leafy, simple, hairy. Panicle corymbous, with hispid and glandular stalks. Leaves oblong, cordate and amplexicaule; upper gradually smaller, acuminate; glaucous below, and remotely toothed.

" Scotland, rare. Banks of the Esk, near Pimain; Glen-Lyon, and banks of the Don (Dee), in Braemar?"

H. *subaúdum* is common in woods.

H. *umbellátum.*—Same localities, not very common.

CRE'PIS (Hawk's-Beard).—See *Compósitæ*, p. 151.

C. *tectórum.*—Pastures, &c., common.

C. *biénnis.*—Chalky fields, in Kent, Surrey, Suffolk, &c.

BORKHA'USIA (————).—See *Compósitæ*, p. 151.

B. *fœtída* (*Crépis fœtída*).—" Dry chalky ground, Cambridgeshire, Norfolk, and Kent."

HYPOCHÆ'RIS (Cat's-Ear).—See *Compósitæ*, p. 151.

H. *maculáta.*—Stem almost leafless, solitary. Leaves oval, oblong, undivided, toothed, spotted above.

" Open, chalky, and limestone countries. Ormeshead, North Wales. Dry woods, east of Forfar—Mr. G. Don."

H. *glábra.*—Gravelly fields, not common.

H. *radicáta.*—Pastures, &c., common.

LAPSA'NA (Nipple-Wort).—See *Compósitæ*, p. 152.

L. *commúnis.*—Waste ground and rubbish, common.

L. *pusílla.*—"Scape branched, very thick, and fistulous upward. Leaves oboval, oblong, toothed."

"Cornfields, in gravelly soils, not common."

CICHO'RIUM (Wild Succory).—See *Compositæ*, p. 152.

C. *intybus.*—Borders of fields, chiefly on chalk.

A'RCTIUM (Bur-Dock).—See *Compositæ*, p. 147.

A. *láppa.*—Waste places, rubbish, and roadsides, common.

β. *Bardána.*—Woolly-headed, not rare.

SERRA'TULA (Saw-Wort).—See *Compositæ*, p. 149.

S. *tinctória.*—Woods and pastures, not rare.

SAUSSU'REA (————).—Differs from *Serrátula* chiefly in the bristly short exterior pappus.

S. *alpína.*—Leaves toothed, cottony beneath. Flowers umbellate.

"Moist alpine rocks. Snowdon, and Highland mountains."

CA'RDUUS (Thistle).—See *Compositæ*, p. 148.

C. *nútans.*—Chiefly on chalky soils.

C. *acanthoídes.*—Roadsides, &c.

C. *tenuiflórus.*—"Waste places and rubbish, chiefly near the sea."

C. *mariánus.*—Waste places, not uncommon.

CNI'CUS (Carduus).—See *Compositæ*, p. 148.

C. *lanceolátus* and C. *palústris.*—Frequent. The former in dry waste places; the latter in wet pastures and shady places.

C. *arvénsis.*—Everywhere in fields.

C. *forstéri.*—Not common, in boggy woods.

C. *erióphorus.*—Chalky downs, not common.

Northamptonshire, Berks, Oxfordshire, &c.

C. *tuberósus.*—"Leaves deeply pinnatifid, lobed, fringed with prickles; lower on long stalks. Stem almost single-flowered, without wing or prickles. Scales of involucre minutely spinous, nearly glabrous. Root creeping, tuberous."

"Wiltshire downs, between Boyton House and Fonthill, abundantly."

C. *heterophy'llus.*—"Leaves semi-amplexicaule, lanceolate, soft, ciliate, dentate, undivided, or laciniate; white and downy beneath. Flowers mostly solitary."

"Mountain pastures in the North, frequent."

C. *praténsis.*—Moist pastures; fens.

C. *acaúlis.*—Common on the downs.

ONOPO'RDUM (Cotton Thistle).—See *Compositæ*, p. 149.

O. *acánthium.*—Roadsides, &c.

CARLI'NA (Carline Thistle).—See *Compositæ*, p. 149.

C. *vulgáris.*—Downs, frequent.

BI'DENS (Bur-Marigold).—See *Compositæ*, p. 146.

B. *cérnua* and B. *tripartíta.*—Common about ponds, &c.; former most frequent.

EUPATO'RIUM (Hemp Agrimony).—See *Compositæ*, p. 146.

E. *cannabinum.*—Banks of rivers and moist shady places, not rare.

CHRYSO'COMA (Goldy-Locks).—"Involucre imbricated, hemispherical. Receptacle bare. Pappus rough. Style scarcely longer than the florets."

C. *linósyris.*—"Leaves linear, glabrous. Scales of involucre spreading."

"Rocky cliffs of Berryhead, Devon; Whorle Hill, Weston, Sussex; Mare, Somersetshire—W. Christy, Esq. Between Brighton and Shoreham—Mr. Trevelyan."

DIO'TIS (Cotton-Weed).—" Involucre imbricated, hemispherical. Receptacle chiefly with fringed scales. No pappus. Corolla with two ears at the base, which border the germen."

D. *maritima.*—" Leaves numerous, densely tomentose. Roots running deep into the sand."

" Sandy sea-shores, chiefly on the east and south of England."

Order II.—SUPE'RFLUA.—(Ray florets fertile. Florets of the disk furnished with both stamens and styles).

TANACE'TUM (Tansy).—See *Compositæ*, p. 146.

T. *vulgáre.*—Borders of fields and river banks, not rare.

ARTEMI'SIA (Wormwood, Mugwort, &c.).—See *Compositæ*, p. 146.

A. *campéstris.*—" Leaves bipinnatifid, with linear segments. Stems twiggy, procumbent before flowering."

" Dry sandy heaths, Norfolk and Suffolk, rare. Near Thetford and Bury."

A. *marítima* with Var. β. A. *gallica.*—Sea-shores, not rare.

A. *absinthium.*—Waste places and commons, near villages; not common.

A. *vulgáris.*—Fields, very common.

A. *cæruléscens.*—" Leaves hoary, mostly lanceolate, undivided, tapering at the base. Lower leaves variously divided. Flowers erect, cylindrical. Receptacle naked."

" Sea coast, near Boston, and in the Isle of Wight: but it cannot be found there now."

GNAPHA'LIUM (Cudweed) (*Antennária*).—See *Compositæ*, p. 146, 147.

G. *dioicum.*—Mountainous heaths, plentiful.

G. *margaritáceum.*—" Banks of the Rymny, South Wales. Wire Forest, Worcestershire, and near Litchfield."

G. *lutéo-álbum.*—Herbaceous leaves semi-amplexicaule; linear, oblong, waved, woolly on both sides. Flowers densely tufted.

Between Hanxtown and Little Shelford, Cambridgeshire. Fields, Larlingford, Norfolk—Rev. G. R. Leathes.

G. *sylváticum,* " with Var. β. G. *eréctum.*—Kent and Surrey; Frequent in Scotland."

G. *supinum.*—" Stem decumbent, branching only from the base. Flowering stems erect. Flowers solitary, or in racemes. Leaves linear, downy on both sides."

" Summits of the Highland mountains, abundant."

G. *uliginósum,* G. *gállicum, mínimum,* and *germánicum,* grow on sandy fields; gravelly and moist places, and dry pastures.

G. *gállicum* is not very common: has been found in Surrey, Essex, Derbyshire, Forfar, &c.

CONY'ZA (Spikenard).—See *Compositæ*, p. 147.

C. *squarrósa.*—On chalky places, not uncommon.

ERI'GERON (Flea-bane).—See *Compositæ*, p. 155.

E. *canadénsis.*—Waste ground, rare. " Probably introduced."

E. *ácris.*—Chalky downs, common.

E. *alpinus.*—Stems usually one-flowered. Pappus shorter than the ray florets.

" α. Stems one to three-flowered. β. One-flowered."

" Highland mountains, Breadalbane, Clova."

TUSSILA'GO (Colt's-Foot).—See *Compositæ*, p. 152.

T. *fárfara.*—Moist clayey soils, very common. An early flowering species.

PETASI'TIS (Butter-Bur), *Tussilágo petasites.*

P. *vulgáris.*—Meadows on river sides, not rare.

SENE'CIO (Groundsel, Ragweed).—See *Compositæ*, p. 152, 153.

S. *vulgáris* (Groundsel).—Everywhere. S. *viscósus.*—Rare.

S. *sylváticus.*—Common on heaths, woods, &c.

Var. β. Leaves eared and amplexicaule.

S. *squálidus.*—" About Oxford."

S. *tenuifólius.*—On chalk and clay, not rare.

S. *jacobæ'us* and *aquáticus* (Ragweeds) are common; the former in dry, the latter in moist, places.

S. *paludósus.*—Leaves entire, semi-amplexicaule. Stem hollow.

Ditches, in the fens, Lincoln, Cambridge, &c.

S. *saracénicus.*—" Leaves entire, sessile. Stem solid."

" Moist meadows and pastures in several parts of England."

A'STER (Star-Wort).—See *Compositæ*, p. 153.

A. *tripólium.*—Salt marshes, frequent.

SOLIDA'GO (Golden-Rod).—See *Compositæ*, 153.

Var. β. Small, with broader radical leaves. Woods, &c.

I'NULA (Elecampane).—Involucre imbricated, with spreading scales. Outer foliaceous. Receptacle bare. Pappus simple.

I. *helénium.*—" Leaves amplexicaule, oval, wrinkled, downy below. Scales of involucre oval, downy."

Moist pastures, rare.

LIMBA'RDA (Golden Samphire).—See *Compositæ.*—" Involucre imbricated, with narrow scales. Receptacle bare. Pappus simple, rough."

L. *crithmoides.* — " Leaves linear, fleshy, usually three-toothed at the tips."

" South and west shores of England and Wales, in salt marshes."

PULICA'RIA (Flea-Bane).—See *Compositæ*, p. 153.

P. *dysentérica.*—Moist places, frequent. Rare in Scotland.

P. *vulgáris.*—" Moist places, where water has stood."

CINE'RARIA (Flea-Wort).—See *Compositæ*, p. 153.

C. *palústris.*—" Shaggy. Stem branchy, fistulose. Leaves broadly lanceolate, sinuated and dentate. Flowers corymbous."

" Norfolk and Cambridge, margins of pools, &c."

C. *campéstris.*—" Var. β. Chalky downs, middle and south of England. β. *marítima.*—Rocks, Holyhead."

DORO'NICUM (Leopard's Bane).—See *Compositæ*, p. 154.

D. *pardaliánches* and D. *plantagíneum.*—" Former, Catton, by Norwich —Dr. Lindley. Mountains of Northumberland, &c. The latter, Essex."

BE'LLIS (Daisy).—See *Compositæ*, p. 154.

B. *perénnis.*—Pastures, everywhere.

CHRYSA'NTHEMUM (Ox-Eye).—See *Compositæ*, p. 154.
C. *leucánthemum*.—Dry pastures, plentiful.
C. *ségetum*.—Cornfields, more common in the North.
PYRE'THRUM (Fever-Few).—See *Compositæ*, p. 154.
P. *parthénium*.—Roadsides, &c., not uncommon.
P. *inodórum*.—Fields, on sand or chalk.
P. *marítimum*.—"Leaves bipinnatifid, with linear fleshy pointless segments. Stem diffuse. Border of fruit lobed."
"Sea coast. Frequent in Scotland."
MATRICA'RIA (Wild Chamomile).—See *Compositæ*, p. 154.
M. *chamomílla*.—"Common in cornfields and on rubbish."
A'NTHEMIS (Chamomile).—See *Compositæ*, p. 154, 155.
A. *marítima*.—"Leaves bipinnatifid, acute, fleshy, dotted, somewhat hairy. Scales of receptacle prominent, sharp pointed."
"Sea coast, Sunderland."
A. *nóbilis* (Common Chamomile).—Pastures and commons, not rare.
A. *arvénsis*.—Gravelly fields, not rare.
A. *cótula*.—Rubbish, cornfields, &c., common.
A. *tinctória*.—"Leaves bipinnatifid, serrated, downy below. Stem erect, branched, sub-corymbous."
"Banks of the Tees; Essex; near Forfar."
ACHILLÆ'A (Yarrow).—See *Compositæ*, p. 155.
A. *ptármica*.—Moist meadows, not rare.
A. *serráta*.—"Leaves linear, lanceolate, sessile, downy, deeply serrated or laciniated at the base. Flowers buff-coloured."
"Near Matlock, Derbyshire."
A. *millefólium* (Milfoil).—Banks, &c., common.
A. *tomentósa*.—"Leaves woolly, bipinnatifid. Segments crowded, linear, acute."
"Dry hilly pastures, in Scotland. Flowers yellow."

Order III.—FRUSTRA'NEA.—(Florets of the disk fertile, of the ray barren).

CENTAURE'A (Knap-Weed, Blue-Bottle, &c.).—See *Compositæ*, p. 149.
C. *jácea*.—"Frequent in Angus; hedges and waste places, Sussex."
C. *nígra*.—Common about hedges, woods, &c. C. *cyánus*.—Cornfields, common.
C. *scabiósa*.—Borders of fields, &c.
C. *isnárdi*.—"Scales of involucre with palmated spines. Leaves somewhat lyrate and scabrous, toothed, slightly amplexicaule. Flowers terminal, solitary, with one or more leaves at the base."
Pastures in Jersey and Guernsey.
A. *calcítrapa*.—Gravelly places, &c.
C. *solstitiális*.—"East and south of England, rare."

Class XX.—GYNA'NDRIA.—(Style bearing the anthers.)

Order I.—MONA'NDRIA.—(One stamen or anther perfect, the other barren.)

O'RCHIS (————).—See *Orchidáceæ*, p. 110.
O. *mório*.—Meadows, not rare. O. *máscula*.—Woods, &c., frequent.

O. *ustuláta.*—Dry chalky pastures, rare.
O. *fúsca.*—Borders of fields, &c., Kent; not common.
O. *militáris.*—"Chalky hills, chiefly about Reading;" rare.
O. *tephrosánthos.*—"Chalky hills, in Berks, Oxfordshire, and Kent;" rare.
O. *hircína.*—"Chalky hills and pastures in Kent and Surrey;" very rare.
O. *pyramidális.*—Pastures, &c., on chalk and clay; not uncommon.
O. *latifólia.*—"Marshes and moist meadows;" not rare.
O. *maculáta.*—Woods, heaths, &c., common.
GYMNADE'NIA (See *O'rchis conópsea*).—On chalk. "Very abundant in Scotland."
HABENA'RIA (————).—See *Orchidáceæ*, p. 111.
H. *víridis.*—"Dry hilly pastures, not unfrequent."
H. *álbida.*—"Spur obtuse, much shorter than the germen (ovary). Lip three-cleft, with acute segments; middle one longest. Segments of the perianth nearly equal, oval, concave."
"Mountain pastures, not unfrequent."
H. *bifólia* (Butterfly Orchis).—Woods, not rare; chiefly on chalk.
H. *chlorántha* (Yellowish ditto).—"Kent—Dr. Lindley." Epping Forest, near Highbeech, communicated by Mr. William Pamplin.
A'CERAS (————).—See *Orchidáceæ*, p. 111.
A. *anthropóphora* (Green-Man Orchis).—Dry chalky or clayey pastures, in Norfolk, Suffolk, Kent, and Surrey.
HERMI'NIUM (Musk Orchis).—See *Appendix*.
H. *monórchis.*—Chalky banks and downs, east and south of England.
O'PHRYS (————).—See *Orchidáceæ*, p. 112.
O. *apífera* (Bee Ophrys).—Chalky soils; in pastures and about pits. Ringstead, near Lynn—The Rev. G. Munford.
O. *arachnites* (Late Spider Ophrys).—Kent—The Rev. G. E. Smith.
O. *aranífera* (Spider Ophrys).—Chalky pastures, woods and pits.
O. *fucífera* (Drone Ophrys).—"Kent—The Rev. G. E. Smith."
O. *muscífera* (Fly Ophrys).—Kent, Surrey, Norfolk, and Suffolk; on chalk.
GOODYE'RA (————).—"Perianth converging, the two lateral segments including the base of the beardless lip. Pollen farinaceous."
G. *répens.*—Lower leaves oval, petiolate; calyx-leaves, petals (perianth), and lip oval, lanceolate. Root creeping.
"Old forests in the North, and especially in the North Highlands of Scotland."
NEO'TTIA (Lady's Tresses).—See *Orchidáceæ*, p. 112.
N. *spirális.*—"Dry hilly pastures, chalk and gravel."
N. *gemmípara.*—"Leaves lanceolate, as long as the stalk. Spike three-ranked, twisted. Bracts glabrous."
"Dun Bog, Bear-Haven, Ireland—Mr. J. Drummond."
LISTE'RA (Bird's Nest, Tway Blade).—See *Orchidáceæ*, p. 111.
L. *ováta* (Tway Blade).—Woods and wet pastures, not rare.
L. *cordáta.*—"Leaves two cordate, opposite. Column without any crest. Lip, with a tooth on each side at the base."
"Sides of mountains; in heathy spots in the north of England and Scotland."
L. *nídus-ávis* (Bird's nest).—Woods, in shady places; not common.
EPIPA'CTIS (Helleborine).—See *Orchidáceæ*, pp. 112, 113.
E. *latifólia.*—Woods, not rare.

E. *purpuráta.*—"Leaves oval, lanceolate. Bracts linear, twice as long as the flower. Lip shorter than the upper segments. Ovary downy. Flowers dark purple."

"Wood, Stonar Hill, near Petersfield. A Var. of E. *latifólia.*"

E. *palústris.*—Bogs in Northamptonshire; rare.

E. *grandiflóra.*—Woods, not rare.

E. *ensifólia.*—"Leaves much acuminated, sub-distichous. Bracts very minute, subulate. Middle lobe rounded, obtuse, much shorter than the segments of the perianth."

Mountainous woods, not common. Meikleham woods — Mr. Cameron, in Reigate Flora.

E. *rúbra.*—Bracts longer than the downy ovary. Perianth spreading. Lip with its mid-lobe acuminate, marked with raised wavy lines.

Mountainous woods, rare.

MALA'XIS (Bog Orchis).—See *Orchidáceæ,* p. 113.

M. *paludósa.*—Spungy bogs, rare. "Frequent in the valleys of Clova."

LI'PARIS (————).—"Perianth spreading, uniform, with linear segments. Lip undivided, reflexed. Column elongated."

L. *loesélii.*—Leaves two, broadly lanceolate. Scape trigonal. Lip entire, longer than the segments of the perianth.

"Sandy bogs in Norfolk, Suffolk, and Cambridgeshire."

CORALLORHI'ZA (Coral-Root).—"Lip produced at the base; its spur adnate with the ovary, or free. Column free."

C. *innáta.*—Spur very short, adnate.

"Marshy woods in Scotland; rare. Ross-shire; Methven Wood. Perthshire; sands of Barric, Dundee—Mr. T. Drummond."

Order II.—DIA'NDRIA.—(Two stamens).

CYPRIPE'DIUM (Venus' Slipper).—"Lip large, inflated. Column with a large terminal dilated lobe (or sterile stamen), separating the anthers. Two lateral segments of the perianth often coherent."

C. *calcéolus.*—Stem leafy. Terminal lobe of the column nearly oval. Lip shorter than the segments of the perianth.

"Woods in the north of England; rare."

Order II.—HEXA'NDRIA.—(Six stamens.)

ARISTOLO'CHIA (Birth-Wort).—See *Aristolocháceæ,* p. 121.

A. *clematítis.*—Stem erect. Leaves cordate. Flowers upright.

"Copses and pastures, especially among old ruins in the east and south of England." In the village of Hemswell, Spittal, Lincolnshire.

CLASS XXI.—MONŒ'CIA.—(Stamens and styles in separate flowers, on the same plant.

Order I.—MONA'NDRIA.—(One stamen).

EUPHO'RBIA (Spurge).—See *Euphorbiáceæ,* p. 120.

E. *péplis.*—"Stem procumbent, forked. Leaves oblong, cordate, nearly entire. Glands of the involucre with small membranous scales beneath. Capsule smooth. Seeds smooth (white)."

"Sandy coast; Devon and Cornwall."

E. *helioscópia.*—Cultivated and waste ground, common.

E. *platyphy'lla.*—" Cornfields, Albourne; and near Henfield, Sussex; Essex, Cambridge, Kent, Tunbridge Wells."

E. *hibérna.*—" Umbel of about five principal branches. Bracts and leaves elliptical, entire. Glands of the involucre four, kidney-shaped, with intermediate rounded lobes. Capsule warted, glabrous, seeds smooth."

" South of Ireland, hedges and thickets. Between Faversham and Sittingbourne, Kent—Hudson."

E. *pilósa.*—" Umbel of three to five principal rays, with several scattered inferior ones. Bracts broadly oval, entire, and, as well as the elliptic, finely serrated leaves, hairy or glabrous. Glands of the involucre four, transversely oval, with intermediate rounded lobes. Capsule warted or smooth, hairy or glabrous. Seeds glossy, smooth."

" *α*. Capsules warted, shaggy. *β*. Capsules dotted with minute brown warts, glabrous, or very slightly hairy. *γ*. Capsules quite smooth and glabrous."

α. Abundant in the hedges, Slinfold, Sussex; naturalized? *β*. Lane and wood, near Priory Park Lodge.

E. *ésula.*—" Umbel of many principal branches, and several scattered ones below. Bracts cordate. Leaves linear, entire, membranous, glabrous. Glands of the involucre lunate. Fruit scabrous. Seeds smooth."

" Woods, near Edinburgh, and at Slinfold, Sussex; Banks of Tweed, near Coldstream."

E. *cyparíssias.*—Florescence as in E. *ésula.* Distinguished by its numerous narrow linear leaves.

" Groves and thickets, Staffordshire, Bedfordshire, Northumberland."

E. *parálias.*—" Sandy sea-coast of England, not frequent."

E. *portlándica.*—Florescence as in E. *ésula*, with the principal branches dichotomous. Bracts triangular, cordate. Leaves membranous, obovol, lanceolate, usually obtuse and sub-mucronate. Glands of the involucre (four) lunate, with two long points. Capsule rough at the angles. Seeds dotted (almost white).

Sandy coast, extreme south and west of England; Wales; Isle of Man; Galloway.

E. *exígua* and E. *péplus.*—Cornfields, common.

E. *láthyris.*—Thickets, about Upton, near Reading; Steep Holmes, in the Severn; Crawfurdland, near Kilmarnock—Miss Drysdale.

E. *amygdalóides.*—Woods, not rare.

E. *charácias.*—Umbel as in E. *amygdaloides.* Bracts broad, perfoliate, acute. Leaves lanceolate. Glands of the involucre lunate. Fruit scabrous. Seeds smooth.

" Needwood Forest, Staffordshire."

CALLI'TRICHE (Water Star-Wort).—See *Halorágineæ*, p. 200.

C. *vérna.*—A common aquatic.

C. *pedunculáte.* — " Fructiferous peduncles more or less elongated, without bracts at the base. Fruit tetragonal, each portion bluntly keeled at the back."

" Ditch, Amberley, Sussex—Mr. Borrer."

C. *autumnális.*—"Fruit irregularly tetragonal, each portion broadly and acutely winged at the back."

"Ditches, near London."

ZANNICHE'LLIA (Horned Pond-weed).—See *Nayasáceæ*, p. 85.

Z. *palústris.*—Ponds and ditches, not rare.

ZOSTE'RA (Grass-Wrack).—See *Nayasáceæ*, p. 85.

Z. *marína.*—Salt-water ditches, common.

Order II.—TRIA'NDRIA.—(Three stamens).

TY'PHA (Cat's-Tail, or, Reedmace).—See *Typháceæ*, p. 87.

T. *latifólia* and T. *angustifólia.*—Not rare in ponds, &c.

T. *mínor.*—"Leaves linear, setaceous. Barren and fertile catkins distant, the latter elliptical."

"Said, by Dillenius, to have been found by Mr. Dandridge, on Hounslow Heath." I have a specimen from the banks of the Rhone, Switzerland, from my friend Mr. Ralph.

SPARGA'NIUM (Bur-Reed).—*Typháceæ*, p. 87.

S. *ramósum* and S. *símplex.*—Ditches, the latter not very common.

S. *nátans* is rather rare in the South, abundant in the North.

CA'REX (Sedge).—See *Cyperáceæ*, pp. 89. 93.

1. Spike simple, solitary.

C. *dioíca* and C. *pulicáris* are not rare in spungy bogs, especially the latter.

C. *davalliána.*—Spike diœcious. Differs from C. *dioíca* in its longer acuminated recurved deflexed fruit; in its rough leaves, and stem, and tufted root."

"Lansdown, near Bath, rare. Mearnshire?"

C. *pauciflóra.*—Spike simple, of few flowers; the uppermost barren. Fruit lax, lanceolate, subulate, spreading, reflexed. Stigmas three.

Not rare on the Highland mountains; Craig Lake, Northumberland.

2. Spiklets aggregate. Uppermost flowers mostly barren. Stigmas two.

C. *incúrva.*—Spiklets collected into a roundish head. Fruit broadly ovate, acuminate, scarcely cleft. Stem obtusely angular. Leaves channelled.

Sandy sea-shores, in the north of Scotland, Buchan coast—Dr. A. Murray, author of "The Northern Flora."

C. *arenária.*—Sea-shores, common.

C. *intermédia.*—Marshes and meadows, not common.

C. *divísa.*—Marshy places, near the sea.

C. *muricáta*, C. *divúlsa* which is very closely allied to C. *muricáta* and C. *vulpína*, grow in moist shady places, in meadows, chiefly near water.

C. *teretiúscula* and C. *paniculáta.*—The latter grows in swampy boggy places; the former in bogs and watery meadows. They are closely allied, in essential characters, but easily distinguishable by habit, size, and locality.

3. Spiklets aggregated; their lowermost flowers sterile. Stigmas two (in C. *váhlii* three).

C. *stelluláta.*—Common in marshes and on heaths.

C. *cúrta.*—Bogs in several places, not frequent. Coast of Kent—Rev. G. E. Smith.

C. *váhlii.*—" Spikes three to four, roundish or oblong, aggregated; the terminal one with barren flowers at its base. Fruit obovate, scabrous above, with minute crystalline prickles, shortly beaked, longer than the obtuse perianth (scale). Stem triangular, rough at the edge."

" Rocks, above the head of Loch Callater, in Braemar—Dr. Greville. Glen, on the south side of Glen Dole—Mr. Brand. A recent addition to the British Flora."

C. *elongáta.*—Spiklets numerous, oblong, lax, rather distant, sterile, with minute pointed bracts. Fruit flattish, convex, acuminate, scarcely bifid at the point, longer than the scales.

Marshes, very rare. Aldwark, Yorkshire; pit side, at Over, Cheshire, 1827—Mr. William Wilson.

C. *ovális.*—Moist woods and marshes, not rare.

C. *tenélla.*—" Spiklets three, bracteated, distant, minute, of about three florets. Fruit elliptical, convex at each side, very smooth and even; beak entire."

In a wood, by the river Esk, Angus-shire, very rare—Mr. G. Don.

C. *remóta.*—Not rare, under hedges.

C. *axilláris* " is scarcely to be distinguished from C. *remóta*, but by its rather stouter habit, broader leaves, and the bracts, except the lower one, scarcely so long as the spike. The scales have rough nerves."

" Marshes, rare. Putney, London; Earsham, Norfolk; Over, Cheshire; Killin, Scotland."

4. Barren and fertile flowers, in separate spikes. Barren spike mostly solitary. Stigmas three.

C. *digitáta.*—Bracts membranous, sheathing. Spikes filiform, erect, lax, fertile, about three, longer than the barren. Fruit obovate, triquetrous, downy, on a short stalk. Leaves plane.

Rare; woods, in limestone countries, near Bath and Bristol; and Thorp Arch, and Mackershaw Wood, Ripon, Yorkshire.

C. *clandéstina.*—" Bracts membranous, fertile. Spikes remote, of very few flowers, concealed by the bracts. Fruit broadly obovate, triquetrous, slightly downy, contracted at the base. Leaves longer than the stems, channelled, rough, rigid."

" On limestone rocks; St. Vincents, Bristol."

5. Barren and fertile flowers, on separate spikes. The barren mostly solitary. Bracts leafy, often sheathing.

* Stigmas three.

C. *péndula.*—Moist shady places, woods and hedges, not common.

C. *strigósa.*—Groves and thickets, east and middle of England; coast of Kent, common—Rev. G. E. Smith.

C. *sylvática.*—Woods, common.

C. *depauperáta.*—" Sheaths much shorter than the flower stalks. Fertile spikes remote, very few flowered. Fruit large, nearly globose, inflated, terminating in a long beaked bifid point."

Dry woods, rare. Charlton Wood, Kent; near Forfar; Godalming, Surrey.

C. *mielichóferi.*—" Sheaths not half the length of the flower stalks. Fertile spikes three, distant, erect, lax. Fruit ovate, tumid, triangular, rough edged, with a membranous cloven beak."

"Rocky ledges of Craigalleach, Breadalbane."

C. *speirostáchys.*—"Sheaths shorter than the flower stalks. Fertile spikes about three, distant, erect, ovate, dense, many-flowered. Fruit ovate, triangular, ribbed, smooth, with a deeply cloven beak, membranous at the tip."

"Hills of Lanarkshire and Perthshire."

C. *capilláris.*—"Common. Sheath half the length of the flower stalks, fertile. Spikes few-flowered, lax, drooping. Fruit oblong, obovate, acuminate, as long as the oval membranous deciduous scale."

"Highland mountains."

C. *limósa.*—"Sheaths very short, scarcely any. Fertile spikes oblong, ovate, pendulous. Bracts sub-setaceous. Scale acute, as long as the fruit, which is elliptic, roundish, striated, with a short mucro."

"Rare in England, mostly found in the northern and mountainous parts, in marshes. More common in Scotland and Ireland."

C. *rariflóra.*—"Sheaths very short, if any. Fertile spikes, narrow, oblong, few-flowered, lax, pendulous. Bracts sub-setaceous. Scale acute, longer and broader than the fruit, which is ovate, striated and somewhat acute."

"Bogs at the head of Glen Dole—Mr. G. Don."

C. *pseúdo-cy'perus.*—Woods, in moist places, meadows, &c., not common.

C. *ustuláta.*—"Sheaths elongated, shorter than the flower stalks. Fertile spikes ovate, pendulous. Bracts scarcely leafy. Fruit elliptical, shortly acuminate (black) bifid at the point."

"Ben Lawers—Mr. G. Don."

C. *atráta.*—Sheaths scarcely any. Fertile spikes pedunculate, ovate inclined, the terminal one with sterile flowers at the base. Bracts sub-foliaceous. Fruit roundish, ovate, compressed, with a bifid beak.

Snowdon, rare. Wet rocks, Breadalbane range.

C. *palléscens* and C. *fulva* are common in marshes and boggy places.

C. *fláva* and C. *œdéri* in turfy bogs and moist heaths.

C. *exténsa.*—"Sheaths very short (scarcely any), with extremely long leafy bracts. Fertile spikes nearly sessile, oblong. Scales slightly mucronate. Fruit ovate, striated, with a short acuminated beak, bifid at the point. Leaves very narrow. Stem smooth."

"Marshes, near the sea, on the east and south of England; near Liverpool and shores of the Menai—Mr. W. Wilson."

C. *distans.*—"Not rare in muddy and wet places, especially near the sea."

C. *binérvis.*—Common on moors, &c.

C. *præ'cox* and C. *pilulífera* on dry pastures and moory ground.

C. *tomentósa.*—"Sheaths scarcely any. Fertile spikes about two, short, cylindrical, nearly sessile, obtuse, with acute scales. Fruit globular, densely downy, with a short, almost entire, beak."

"Meadows, near Merston Measey, Wiltshire. The only British station known."

C. *panicéa.*—Boggy places, common. C. *recúrva.*—Meadows and moors, common.

* * Stigmas two.

C. *púlla.*—"Sheaths none. Bracts foliaceous. Fertile spikes ovate, obtuse; the lower one stalked. Scales oblong. Fruit spreading, elliptical, inflated, with a very short bifid beak."

"Rare, near springs on the higher regions of the Scottish mountains; Ben Lomond—Mr. G. Don. Breadalbane range."

C. *cæspitósa.*—Marshes and wet pastures, not unfrequent.

C. *rígida.*—"Sheaths none. Bracts foliaceous, auricled at the base. Fertile spikes sub-cylindric, obtuse, loosely imbricated; the lower one pedunculated. Fruit obovate, attenuated at the base, slightly stalked, with a very short entire point. Leaves mostly recurved, broadly linear."

"On Snowdon, the Cheviots, and all the more elevated Highland hills."

C. *strícta.*—Marshes, common.

C. *aquátilis.*—"Sheaths none. Bracts long, leafy. Fertile spikes nearly sessile, cylindric, elongated, attenuated below, often acuminated, with barren flowers at the extremity. Fruit roundish, obovate, with a short entire point. Stem smooth, obtusely triangular. Leaves long, straight, narrow, linear, not fibrous at their bases."

"Gathered by Mr. Drummond, Dr. Greville, Mr. Burchell, and Sir Wm. J. Hooker, on the table lands, in boggy situations, on the mountains of Clova, and since, by Dr. Graham and his party, in several places in the same country."

6. Barren and fertile flowers, in separate spikes. Barren spikes two or more. Stigmas three (except C. *acúta*).

C. *acúta.*—Moist meadows, &c., frequent.

C. *paludósa.*—Banks of rivers and ditches, common. C. *ripária.*—Very common about salt water rivers.

C. *lævigáta.*—"Sheaths elongated, shorter than the flower stalks. Bracts foliaceous. Fertile spikes drooping, cylindric, all the scales acuminate or mucronate. Fruit ovate, triangular, striated, with a longish, acuminated bifid beak."

"Marshes &c., not common."

C. *vesicária.*—"Sheaths none. Bracts leafy, long. Fertile spikes cylindric, slightly drooping. Scales lanceolate. Fruit broadly ovate, inflated, subulate, with a cleft beak."

"Marshes, more frequent in the North."

C. *ampullácea.*—"Sheaths none. Bracts leafy. Fertile spikes cylindric, long, nearly erect. Scales lanceolate. Fruit crowded, globular, inflated, with a setaceous beak, slightly bifid."

"Bogs and marshes, more plentiful in Scotland than in England." Pentney, Lynn—The Rev. George Munford.

C. *hírta.*—Wet pastures, &c., common.

C. *filifórmis.*—Glabrous, sheaths scarcely any. Bracts long, very narrow. Fertile spikes on short peduncles, oblong, cylindric, with pointed scales. Fruit ovate, with a short deeply cleft beak, very pubescent.

"Boggy marshes, rare. Chiefly in Scotland, Cheshire, and Anglesea."

C. *hordeifórmis.*—"Sheaths as long as the flower stalks. Bracts leafy, very long. Sterile spikes about two, remote. Scales mucronate. Fruit oblong, acuminate, striated, rough at the margin, deeply cleft. Stem smooth, bluntly angular."

"In a small valley, about three miles west of Panmure, Forfarshire, among some bushes, near a spring, rare—Mr. T. Drummond."

C. *stictocárpa.*—" Fertile spikes two, ovate, stalked, with pointed scales. Sheaths scarcely any. Fruit obovate, obtuse, pointless, finely dotted." " Lofty mountains of Clova—Mr. G. Don."

C. *angustifólia.*—" Fertile spikes one or two, ovate, stalked. Scales obtuse. Sheaths none. Fruit ovate, compressed, smooth, with a short abrupt beak. Leaves linear, channelled."

" Marshes in Angus-shire—Mr. G. Don."

ELY'NA (————).—Spiklets two-flowered; upper barren; lower fertile, included in a broad sheathing bract. Barren flowers, with three stamens; fertile, with one style and three stigmas. Nut (fruit) obtusely trigonal, surrounded by its convolute scale. In habit allied to *Scirpus*, and still more to *Bly'smus*, but the flowers are monœcious. It wants the urceolate corolla (sac) of CAREX.

E. *caricína.*—Spiklets aggregate, compound.

Moors in Durham and Yorkshire. On Cronkley Fell, and about Widdy Bank, in Teesdale Forest.

Order III.—TETRA'NDRIA.—(Four stamens).

LITTORE'LLA (Shore-Weed).—See *Plantagináceæ*, p. 126.

L. *lacústris.*—" In watery, sandy and stony places; particularly abundant on the margins of the Highland Lakes, where it forms a green turf."

A'LNUS (Alder)—See *Betulíneæ*, p. 115.

A. *glutinósa.*—About waters, frequent.

BU'XUS (Box).—See *Appendix*.

B. *sempervírens.*—Chalky hills in the south of England.

URTI'CA (Nettle)—See *Urticáceæ*, p. 119.

U. *pilulífera.*—" Rare. Rubbish, chiefly near the sea, Norfolk and Suffolk."

U. *úrens* and U. *dioíca.*—Waste places and in fields.

XA'NTHIUM (Bur-Weed).—See *Compositæ*, p. 155.—*Barren flowers.* Involucre of few scales, with many small capitate florets on a common receptacle. Calyx none. Corolla obovate, sessile (perianth single). Anther terminating a tube which is inserted at the base of the corolla. *Fertile flower.* Involucre single, prickly, with two beaks entirely inclosing two flowers; the two stigmas only protruded from small apertures within the beaks. Calyx none. Corolla none (no perianth). Fruit one-seeded, included in the enlarged and indurated involucre.

X. *strumárium.*—Stem unarmed. Leaves cordate, angled, toothed, with three principal nerves at the base. Beaks of the fruit straight, prickles hooked.

Rare in waste ground, south of England. Lately gathered near Dulwich, Surrey.

AMARA'NTHUS (Amaranth).—Perianth single, three to five-parted. Stamens three to five. Fertile flowers, with two to three styles. Capsule one-celled, bursting transversely, one-seeded.

A. *blitum.*—" Flowers three-cleft, triandrous, in small lateral clusters, the segments very obtuse. Leaves oval, obtuse. Stem spreading."

" Rare; in low waste ground about Cambridge, London, Huntingdonshire."

BRYO'NIA (Bryony).—See *Cucurbitáceæ*, p. 159.

B. *dioíca.*—Common in hedges.

Order IV.—HEXA'NDRIA.—(Six stamens).

ERIOCAU'LON (Pipe-Wort).—Flowers collected into a compact scaly head. Barren flower in the centre. Perianth single, four to six-cleft, the inner segments united. Perianth of fertile flowers single, deeply four-cleft. Style one. Stigmas two to three. Capsule two to three-lobed, two to three-celled. Cells one-seeded.

E. *septanguláre*.—" Scapes striated, longer than the cellular, compressed, subulate, glabrous leaves. Flowers four-cleft, hairy at the tips. Stamens four. Capsule two-celled."

" Lakes, in mountainous countries, rare. In Skye, Coll, and some of the neighbouring islands of the Hebrides. Cunnamara, north-west of Ireland, frequent."

Order V.—POLYA'NDRIA.—(Stamens indefinite).

CERATOPHY'LLUM (Horn-Wort).—See *Ceratophylláceæ*, p. 119.
C. *demérsum*.—Common in slow streams and ditches.
C. *submérsum*.—Not so common.
MYRIOPHY'LLUM (Water-Milfoil).—See *Halorágineæ*, p. 199.
M. *spicátum*.—Common in stagnant water.
M. *verticillátum*.—" Not common. Ponds, &c., in Norfolk, Cambridge, and Cheshire." Woolmer Forest, Hants.
SAGITTA'RIA (Arrow-head).—See *Alismáceæ*, p. 108.
S. *sagittifólia*.—Ditches and rivers; not rare.
A'RUM (Cuckoo-Pint).—See *Typháceæ*, p. 87.
A. *maculátum*.—Under hedges, common; rare in Scotland.
POTE'RIUM (Salad Burnet).—See *Sanguisorbíneæ*, p. 194.
P. *sanguisórba*.—Dry chalky pastures, common.
QUE'RCUS (Oak).—See *Quercíneæ*, p. 114.
Q. *róbur*.—Woods and hedges. Q. *sessiliflóra*.—Ditto, not uncommon.
FA'GUS (Beech).—See *Quercíneæ*, p. 114.
F. *sylvática*.—Common in woods on a chalky soil.
CASTA'NEA.—(Chestnut).—See *Quercíneæ*, p. 114.
C. *vulgáris*.—Woods in the south and south-west of England.
BE'TULA (Birch).—See *Betulíneæ*, p. 115.
B. *álba*.—Common.
B. *nána* (Dwarf-Birch).—Leaves orbicular, crenate. A small shrubby plant, about two feet high.
Highlands of Scotland.
CARPI'NUS (Hornbeam).—See *Betulíneæ*, p. 115.
C. *bétula*.—Woods and hedges; Epping Forest, &c.
CO'RYLUS (Hazel).—See *Quercíneæ*, p. 114.
C. *avellána*.—Hedges, &c., abundant.

Order VI.—MONA'DELPHIA.—(Stamens united.)

PI'NUS (Pine).—See *Coniferáceæ*, p. 113.
P. *sylvéstris*.—Indigenous in the Highlands.

Class XXII.—DIŒ'CIA.—(Stamens and styles on separate flowers, and on separate plants.)

SA'LIX (Willow).—See *Salicíneæ*, pp. 115. 118.

1. Mona′ndræ—One stamen. Filament (stamen) with a double anther.

S. *purpúrea.*—"Decumbent, leaves lanceolate, broadest upwards, attenuated below, serrated, glabrous. Ovary ovate, sessile, very pubescent. Stigma ovate.

Meadows, between Thorpe and Norwich—(Sm.)

S. *hélix* is taller and more erect.

S. *lambertiána.*—"Leaves broader at the base than in the preceding, with purplish glaucous shoots."

"Banks of the Willy, at Boyton, Wilts; and near Staines—Aylmer Bourke Lambert, Esq."

S. *woollgariána.*—"Leaves cuneate, lanceolate, in other respects like the former."

"Lewes, Sussex; in Osier Holts; Kingston-on-Thames."

S. *forbyána.*—Leaves lanceolate, oblong, stipulate. Style equal in length to the linear divided stigma.

Fincham, Norfolk, and near Lynn.

S. *rúbra.*—"Known by its two connected stamens from the species of this section."

"Maidenhead, Windsor, &c., rare."

2. Tria′ndræ—Three stamens.

S. *unduláta.*—Leaves lanceolate, acuminate. Ovaries stalked, ovate, acuminate. Scales very hairy.

Lewes, Sussex.

S. *triándra.*—"Larger than S. *unduláta*, with glabrous fruit, and glabrous retuse scales."

"Not rare in osier grounds."

S. *hoffmanniána.*—"Leaves shortly and broadly lanceolate, slightly rounded at the base. Known from S. *triándra* by its humbler growth."

"Sussex."

S. *amygdalína.*—Leaves ovate, rounded at the base.

Norfolk, &c.

3. Penta′ndræ—Stamens more than three.

S. *pentándra.*—Leaves elliptic, lanceolate, glandular. Style scarcely any.

Common in the North.

S. *meyeriána.*—Distinguished from the last by the stipitate ovaries.

Brough, Westmoreland.

4. Fra′giles—Stamens two. Catkins lax. Ovaries glabrous.

S. *decípiens.*—Leaves lanceolate, very glabrous. Ovaries tapering. Style longer than the cloven stigmas.

Osier grounds.

S. *frágilis.*—Leaves oval, lanceolate. Style short. Stigmas bifid. Scales pubescent, much ciliated.

Common.

S. *russelliána.*—"Leaves tapering at both ends. Scales narrow, lanceolate, slightly ciliated or pubescent."

"A very valuable tree, first brought into notice by the late Duke of Bedford."

5. A'LBÆ—Leaves furnished with long silky hairs beneath. Catkins lax.

S. *álba* and S. *vitéllina* are common in hedges, moist woods, &c.

6. GRI'SEÆ—(Borrer).

S. *petioláris.*—Ovaries very silky, on long stalks. Catkins very short. Stigmas divided, nearly sessile. Scales hairy, scarcely longer than the pedicel."

Angus-shire—Mr. G. Don.

7. ROSMARINIFO'LIÆ—Small erect shrubs, with linear entire leaves, or with very minute glandular teeth. Catkins short, lax.

S. *rosmarinifólia.*—Catkins curved, lax. Ovaries silky, stalked. A slender upright shrub, two to three feet high.

S. *angustifólia.*—" Catkins ovate, erect. Fruit densely silky, stalked."

" Closely allied to the last. Clova mountains—Mr. G. Don."

8. FU'SCÆ—Small procumbent shrubs.

S. *doniána.*—" Leaves oboval, lanceolate, slightly serrated. Stipules linear. Catkins erect, cylindric. Fruit stalked, silky, longer than the scale."

" Scotland, discovered by Mr. G. Don. Shrub six feet high."

S. *fúsca.*—" Leaves elliptic, quite entire, or with minute glandular serratures, very silky beneath. Germens (fruit on a long stalk, very silky). Stems more or less procumbent."

Of this species there are several varieties characterized by the habit of the stem and branches.

9. AMBI'GUÆ—(Doubtful).

S. *ambígua.*—" Leaves oboval, slightly serrated upwards, downy above. Catkins lax. Fruit upon long hairy stalks."

" Of this species there are several varieties, distinguished chiefly by the differences in the style and leaves."

10. RETICULA'TÆ—(Reticulated).

S. *reticuláta.*—" Leaves nearly elliptic, orbicular, remarkably reticulate."

" Lofty mountains, north of England and Scotland."

11. GLAU'CÆ—(Glaucous).

S. *gláuca.*—" Leaves oval, lanceolate, entire, downy, snow-white and very cottony beneath. Fruit sessile, narrow, elliptic, ovate, very downy. Stigmas nearly sessile, bifid."

" Clova mountains—Mr. G. Don."

S. *arenária.*—" Distinguished from S. *gláuca* by its longer fruit, long style, with often entire stigmas."

" Breadalbane and Clova mountains."

S. *stuartiána.*—" Distinguished, according to Mr. Borrer, by the leaves, which are sharp at each end, and grey, with hairs above."

" Breadalbane mountains—Rev. Dr. Stuart, of Luss."

12. VIMINA'LES—Trees with long pliant branches and lanceolate leaves.

S. *viminális* and S. *stipuláris* are not scarce in osier grounds, &c.

S. *smithiána.*—Leaves obscurely crenated, pubescent beneath. Stipules very small, narrow, acute. Fruit lanceolate, subulate, very silky, on short stalks.

About Bury.

S. *ferruginea.*—"Leaves thin, with wavy crenatures and small teeth, minutely hairy on both sides. Stipules small, half oval. Fruit silky, stalked."

"Banks of the Thames—Mr. G. Anderson."

S. *acumináta.*—"In moist woods and hedges, frequent."

S. *holosericéa.*—Leaves lanceolate, acuminated, serrated, glabrous above; pale, downy, and strongly veined beneath. Catkins cylindrical. Ovary stalked, densely clothed with silky wool. Stigmas ovate, sessile.

Lewes, Sussex.

13. Cine'reæ—Trees with downy branches and wrinkled leaves.

S. *cinérea.*—Woods, common. S. *aquática.*—Ditto.

S. *oleifólia.*—Very closely allied to the two preceding.

Norfolk.

S. *auríta* and S. *capréa* are common; the former in moist woods, the latter on dry pastures and heaths.

S. *sphaceláta.*—Leaves elliptic, oboval, plane, downy on both sides, discoloured at the point.

Fionlarig, near the head of Loch Tay.

14. Nigrica'ntes—(Becoming black in drying).

S. *cotinifólia.*—Leaves elliptic, orbicular, slightly downy above; more downy and glaucous, and veined below. Fruit stalked, lanceolate, acuminate, with a bifid style, and roundish notched stigmas.

Norfolk, and near Glenluce and Forfar.

S. *hírta.*—"Leaves narrower at the base than the preceding, to which it is closely allied."

"Norfolk; Castle Eden, Yorkshire."

S. *nígricans.*—Leaves elliptic, lanceolate, acute, crenate, glabrous above; glaucous beneath. Stamens two, thrice the length of the hairy scales. Fruit lanceolate, downy, on a short downy stalk.

Fens, osier grounds, &c.

S. *andersoniána.*—"Leaves elliptic, oblong, acute, glaucous beneath. Stipules small, sub-oval. Branches minutely downy. Fruit linear, subulate, glabrous, stalked. Style long, bifid. Stigmas ditto. Scales fringed with a few silky hairs."

"Banks of the Tyne, below Newcastle."

S. *damascéna.*—"Young shoots densely hairy. Leaves oval, bluntly toothed, green on both sides. Stipules semi-cordate. Fruit stalked, naked. Style divided, longer than the diverging stigmas."

"South of Scotland, and the borders."

S. *forsteriána.*—Distinguished from S. *damascéna* by its longer catkins, crowded ovaries, and the dissimilarity of colour on the two sides of the leaf, with the preceding.

S. *rupéstris.*—"Stem trailing. Leaves oboval. Stigmas undivided; by which it is to be known from the two preceding."

"Blanchland, Northumberland; Rocks of Craigalleach, Scotland."

S. *petræ'a.*—"Young shoots densely hairy. Leaves oblong, serrated, carinate, twisted, reticulated, with deeply sunken veins, hairy beneath,

glaucous, at length pale green. Stipules large, semi-cordate. Fruit stalked, bare, wrinkled towards the point. Style divided."
"Breadalbane—Mr. Borrer."

S. *propínqua.*—Fruit silky: a character not belonging to S. *petræ'a.*

15. Bicolo'res.—Leaves dark green above, very glaucous below.

S. *tenúior.*—"Leaves on slender petioles, oboval, lanceolate, acute, flat. Stipules acute. Catkins slender, lax. Scales acute, longer than the silky stalk of the fruit."
"Lochy, near Killin."

S. *lámina.*—"Leaves elliptic, oblong, with dilated petioles. Scales obtuse, hairy, half as long as the densely downy, ovate, long stalked ovaries."
"Woods."

S. *laxiflóra.*—"Leaves broadly oboval, narrow at the base. Stipules concave. Catkins loose. Fruit stalked, bare."
"Killin, in Breadalbane."

S. *radícans.*—"Fruit very silky, as well as the scales."
"Breadalbane mountains."

S. *borreriána.*—"Leaves broadly lanceolate, with shallow serratures. Fruit stipitate, glabrous."
"Glen Nevis and Breadalbane—Mr. Borrer."

S. *davalliána.*—"Young shoots and petioles pubescent. Scales oboval, silky. Fruit stalked."
"Scotland."

S. *tétrapla.*—"Leaves unequally serrated, with prominent veins below. Stipules semi-sagittate."
"Breadalbane."

S. *weigeliána.*—Leaves almost round, slightly crenated. Catkins on short stalks.
Mountainous parts of Great Britain.

S. *tenuifólia.*—Leaves elliptical acute, serrated. Fruit ovate, glabrous, on a short smooth stalk.

S. *nítens.*—"Leaves oval or elliptical, acute, slightly serrated, with sunk veins above. Catkins on short stalks. Bracts small. Scales oblong, hairy, longer than the hairy stalk of the fruit."
"Scotland."

S. *croweána.*—"Stamens combined below. Leaves elliptic, slightly serrated, quite glabrous."
"Norfolk—Mr. Crowe."

S. *bícolor.*—"Leaves green, and shining above; glaucous below. Stipules crescent-shaped, serrated. Barren catkins copious, bright yellow."
"Banks of the Ettrick—Mr. G. Anderson."

S. *phillyreifólia.*—Leaves acute at each end and strongly serrated.
Highland valleys, of Scotland, in Inverness-shire and Perthshire.

S. *dicksoniána.*—Leaves elliptical, acute, slightly toothed. Young branches very glabrous. Catkins ovate, short, erect. Fruit stalked, ovate, silky.
Scotland—Mr. Dickson.

16. Vacciniifo′liæ.—"Small procumbent shrubs, with leaves resembling Vacci′num. Ovaries sessile, downy."

S. *vacciniifólia*.—"Leaves glaucous and silky below. Fruit ovate, silky."
"Highland mountains, not rare."

S. *carináta*.—"Leaves oval, frequently folded, so as to form a keel. Fruit oblong, densely silky; stouter than the last, with more upright branches."
"Highlands of Scotland."

S. *venulósa*.—Leaves oval, reticulated, with prominent veins. Stem erect much branched.

S. *prunifólia*.—"Ovaries oblong, ovate, very silky."
"Both species or varieties on the Highland mountains."

17. Myrsini′tes—Leaves small, glossy, rigid.

S. *myrsinites*.—Leaves elliptic, waved, serrated, shining, with prominent veins. Catkins short, lax. Ovary sessile, lanceolate, loosely silky.
Rare, Highland mountains.

S. *procúmbens*.—Twice the size of S. *myrsinites*, with flatter leaves, and differing in the fruit, style, and stigma.
Glencoe.

18. Herba′ceæ—(Minute and herbaceous-like).

S. *herbácea*.—"Leaves orbicular, serrated, glabrous, shining, veined. Fruit lanceolate, sessile. Style and stigmas bifid. Catkins with few flowers."
"Snowdon, and on all the Highland mountains."

19. Hasta′tæ—With broad leaves and shaggy catkins.

S. *hastáta*.—"Leaves broadly elliptical, waved, thin, and crackling, quite glabrous, glaucous below. Stipules large, cordate, about as long as the foot-stalks. Fruit on a short stalk, lanceolate, glabrous. Scales with long silky hairs."
"Sands of Barrie, near Dundee—Mr. T. Drummond."

S. *lanáta*.—Leaves shaggy, entire, glaucous beneath. Fruit nearly sessile.
"Scottish mountains, rare. First found in Glen Callater by Mr. G. Don. Head of Glen Dole, two miles west of Acharne, the uppermost farm-house of Clova."

Order II.—TRIA′NDRIA.—(Three stamens.)

EMPE′TRUM (Crow-Berry).—Perianth of the barren flower of many imbricating scales; the three inner regular, spreading, petaloid. Filaments long. Perianth of fertile flowers the same. Fruit baccate, globose, with six to nine seeds.

E. *nígrum*.—"Procumbent leaves linear, oblong."
"Mountainous heaths in the north, abundant."

RU′SCUS (Butcher's-Broom).—See *Asparagineæ*, p. 107.

R. *aculeátus*.—Woods, hedges and bushy places, not rare.

Order III.—TETRA′NDRIA.—(Four stamens).

VI′SCUM (Misseltoe).—See *Loranthácea*, p. 159.

V. *álbum*.—"On apple, white thorn, and poplar, rare on the oak; frequent in the south of England."

HIP'POPHAE (Sallow Thorn).—See *Elæagnáceæ*, p. 125.
H. *rhamnoídes*.—"Sand hills, and upon the cliffs of the south and south-east coast of England."
MYRI'CA (Gale).—See *Myricíneæ*, p. 116.
M. *gále*.—"Bogs and moory ground; fens. Scotland, abundant."

Order IV.—PENTA'NDRIA.—(Five stamens).

HU'MULUS (Hop).—See *Urticáceæ*, p. 119.
H. *lupúlus*.—Hedges, not rare.

Order V.—HEXA'NDRIA.—(Six stamens).

TA'MUS (Black-Bryony).—See *Dioscoreáceæ*, p. 108.
T. *commúnis*.—Hedges, common.

Order VI.—OCTA'NDRIA.—(Eight stamens).

PO'PULUS (Poplar).—See *Salicíneæ*, p. 115.
P. *álba*.—Woods, not common. P. *canéscens*.—Frequent in Norfolk.
P. *trémula*.—Frequent in Scotland.
P. *níger*.—The most common species; moist places, river banks, &c.
RHODI'OLA (Rose-Root).—Barren flowers, with a four-parted calyx, and four petals, and four emarginate glands. Fertile flowers, with a similar calyx and corolla, and four marginate glands. Ovaries four, many-seeded.
R. *roséa*.—North of England and Ireland, on mountainous wet rocks. Some parts of Scotland abundant.

Order VII.—ENNEA'NDRIA.—(Nine stamens.)

MERCURIA'LIS (Mercury).—See *Euphorbiáceæ*, p. 120.
M. *perénnis* (Dog's Mercury).—Woods and hedges, abundant.
M. *ánnua* (Annual Mercury).—"Towns and villages, not common."
HYDRO'CHARIS (Frog-Bit).—See *Hydrocharáceæ*, p. 109.
H. *mórsus ránæ*.—"Ditches and ponds, not very frequent."

Order VIII.—MONA'DELPHIA.—(Stamens connected).

JUNIPE'RUS (Juniper).—See *Coniferáceæ*, p. 114.
J. *commúnis*.—Downs, common.
Var. β. Small, procumbent. Wales.
TA'XUS (Yew).—See *Coniferáceæ*, p. 114.
T. *baccáta*.—Downs, not rare,

CLASS XXIII.—POLYGA'MIA.—(Stamens and pistils on the same or separate flowers; on different plants or on the same plant).

Order I.—MONŒ'CIA.

A'TRIPLEX (Orache).—See *Chenopodiáceæ*, p. 122.
A. *portulacoídes* and A. *laciniáta*.—Sea shores.
A. *pátula* and A. *angustifólia*.—Common on waste ground, rubbish, &c.
A. *erécta*.—"Stem erect. Leaves oval, lanceolate; lower sinuated. Perianth of the fruit armed with sharp tubercles."
"Waste ground, very rare. Near Battersea fields—Messrs. Mill and Cole."

A. *littorális.*—"Stem herbaceous, erect. Leaves linear, entire or toothed. Perianth of the fruit sinuated and muricated at the back."

"Muddy salt marshes, chiefly on the east coast."

A. *pedunculáta.*—"Stem herbaceous, zigzag, with patulous branches. Leaves oboval, lanceolate. Seed bearing flowers, cuneate, two-horned, on long stalks."

"Muddy salt marshes, east and south coast of England."

Class XXIV.—CRYPTOGA'MIA.

Order I.—FI'LICES—(Ferns).

GRA'MMITIS (————).—Sori (fruit) oblong or linear, straight, scattered. Involucre (indusium) none.

G. *céterach.*—Frond pinnatifid, covered beneath with imbricated chaffy scales. Segments oval, obtuse.

"Rocks and walls; abundant in limestone countries; rare in Scotland. Walls, at Winchester, chiefly on the east and north-east of the city — Mr. William Pamplin. On the Tower of Old Alresford Church, Hants—Mr. Forder. Old wall, near Cowley, Oxon—Mr. Baxter."

POLYPO'DIUM (Polypody).—See *Fílices*, p. 79.

P. *vulgáre.*—Walls, banks, trees, frequent.

Var. β. *serrátum*—Not rare about Albury. Another approaching γ. *proliferum.*—Same locality.

P. *phegópteris.*—"Fronds bipinnatifid; two lowermost pinnæ standing forward. Segments linear, lanceolate, obtuse, entire, ciliated; lowermost adnate, decurrent."

"Shaded rocks in mountainous countries. Rocks at the foot of Cheviot, above Langleyford—Mr. Winch. Wensleydale, Yorkshire—Mr. J. Ward. Common about Settle, Yorkshire; rocks at the Belle-Hag, one mile from Sheffield—Mr. G. Francis."

P. *dryópteris.*—Frond tripinnate, tender. Branches drooping. Lobes obtuse, crenate. Sori distinct.

Dry stony places in mountainous countries. Rocks at the foot of Cheviot, above Langleyford—Mr. Winch. Rocks at the Belle-Hag, near Sheffield—Mr. G. Francis. Scotton Common, near Gainsborough.

P. *calcáreum.*—Similar to the last. More rigid; more deeply crenate.

Moors, Matlock, or Cromford, &c., Derbyshire.

WOO'DSIA (Hair-Fern).—Sori scattered, roundish, with an indusium which is cut at the edge into many, often capillary segments.

W. *hyperboréa.*—"Frond pinnate, oblong, nearly smooth. Pinnæ triangular, blunt, deeply crenated."

"Mountainous rocks, Wales and Scotland. Ben Lawers—Dr. Murray. Clova mountains — Mr. G. Don. Snowdon, sparingly."

CISTO'PTERIS (Bladder Fern).—See *Filices*, p. 81.—Indusium inflated, not attached by a central column as in *Aspídium*, but only by the outer edge.

C. *dentáta*.—"Frond bipinnate, oblong, lanceolate. Pinnæ oval, lanceolate. Pinnules oval, obtuse, crenate. Sori distinct."

Var. β. *angustáta*.—Frond oblong, oval. Pinnæ oval, pointed.

Rocks, north of England and Wales; Settle, Yorkshire; Ben Lawers. β. On lofty hills in the North.

C. *frágilis*.—Frond twice pinnate, lanceolate. Pinnæ lanceolate. Pinnules oval, pointed, deeply cut, toothed, decurrent.

On alpine rocks. Ruins of Peveril Castle, Castleton, and the Lover's Leap, near Buxton, Derbyshire; Cheddar, Somerset; wall, at Albury—J. S. Mills, Esquire. (This wall is opposite the old wall of Weston House lawn, and towards the east end where the ivy almost covers the wall. I have much pleasure in confirming Mr. Mills' habitat.) Aberdeenshire —H. C. Watson, Esquire.

C. *alpína*.—"Frond tripinnate, oval, lanceolate. Pinnules oval, blunt. Segments linear, obtuse, toothed."

"Wall, at Low Layton, Essex—Mr. William Pamplin. Snowdon, near the copper mine. Ben Lawers, Perthshire—Mr. Maughan."

ASPI'DIUM (Shield Fern).—See *Filices*, pp. 79, 80.

A. *lonchítis*.—"Frond pinnate. Pinnæ lunate, bristly, serrated. Rachis scaly."

"Alpine stations. Breadalbane mountains. Plentiful in the Highland valleys. Rare in England."

A. *lobátum*.—"Frond bipinnate. Lobes decurrent, spinulose, elliptic; the one next the rach very large. Pinnæ shorter and more crowded (usually) than A. *aculeátum*. Lobes convex, thick and glaucous, not so scaly as the subsequent species."

"Epping Forest, not rare. Sussex and Kent—Rev. G. E. Smith." Common in Scotland and the North.

A. *aculeátum*.—Frond bipinnate, broadly lanceolate. Pinnules petioled, oval, auricled, aristate. Rach scaly.

The Var. *lonchitidoídes*, Clova mountains; Braid woods, Edinburgh. Var. δ. *lineáris*, near Clonmell.

A. *thely'pteris*.—Tunbridge Wells—Mr. William Pamplin. Windsor Park, and Sunninghill Wells, Berks. Belton, Suffolk, Mr. Paget.

A. *oreópteris*.—Heaths, &c., Sussex and Kent—Rev. G. E. Smith. Bailey's Hill, between Brasted and Tunbridge—Mr. William Pamplin.

A. *filix mas*.—Common.

A. *cristátum*.—"Frond pinnate. Pinnæ opposite, pinnatifid, oblong, obtuse. Segments oval, decurrent, crenated, bristled."

"A very rare fern. Lows Holt Heath, Norfolk. On bogs, among alder bushes, at Westleton, Suffolk—Mr. Davy."

A *rígidum*.—"Frond bipinnate. Pinnæ alternate. Lobes oblong, decurrent, doubly toothed. Rach scaly. Differs from A. *spinulósum* in its scaly thicker rach, more numerous and closer pinnæ, with decurrent lobes, not spinulose."

"Discovered by the Rev. W. T. Bree on Ingleborough, near the foot of the mountain towards the neighbouring village."

A. *spinulósum*.—On wet moors, &c., not rare.

A. *dilatátum*, with several varieties, not rare, except Var. δ. (*dumetórum*), frond small, triangular, drooping. Pinnules blunt.

Derbyshire, and about Settle.

ASPLE'NIUM (Spleen-Wort).—See *Filices*, p. 81, 82.

A. *septentrionále.*—"Frond simply-parted. Segments linear, sharply toothed at their extremity."

"Alpine rocks; Borodale, Cumberland; Ingleborough; Snowden (rare); Arthur's Seat, Edinburgh."

A. *alternifólium.*—"Frond pinnate. Pinnæ alternate, cuneate, notched."

"Discovered by Mr. Dickson on rocks, two miles from Kelso, on the Tweed. Near Dunfermline and Edinburgh, sparingly—Dr. Dewar."

A. *marínum.*—Frond oblong, pinnate. Pinnæ obtuse, serrate, slightly auricled above. Rach winged.

Common in Devon, Cornwall, &c.; Aberdeenshire—Dr. Murray. I suspect this is the plant I found, several years ago, in a stone pit, Colley Weston, near Wansford.

A. *trichománes.*—Not rare on old walls, banks, &c.

A. *víride.*—Frond pinnate, linear. Pinnæ roundish, deltoid, crenated. Rach green.

Rocks in the North. Northumberland, Westmoreland, Yorkshire; Highlands, common.

A. *rúta murária.*—Walls and rocks, not rare.

A. *fontánum.*—"Frond bipinnate. Pinnæ oblong, blunt, alternate. Pinnules cuneate, cleft and toothed."

"Very rare; supposed to be now extinct in England. Once found on Amersham Church, Bucks, and on Alnwick Castle; Wybourn, Westmoreland. Switzerland, Saxony, and Siberia."

A. *adiántum nígrum.*—Not rare.

A. *lanceolátum.*—"On rocks, south of England and Wales."

A. *fílix fœ'mina.*—See *Aspidium fílix fœm.*

Var. β. and γ.—Not rare in boggy places, woods, &c.

SCOLOPE'NDRIUM (Hart's Tongue).—See *Filices*, p. 82.

S. *vulgáre.*—"South of England, not rare. In Derbyshire, by Matlock Bath, nearly, or quite, three feet high. The multifid var. in Wales.

PTE'RIS (Brakes).—See *Filices*, p. 82.

P. *aquilína.*—Very common.

CRYPTOGRA'MMA (Rock-Brake).—"Sori linear or roundish, oblique, inserted upon the lateral nerves of the pinnule, at length confluent, and thus appearing marginal.

C. *crispa.*—"Frond thrice-pinnate. Fertile pinnules oblong, blunt; barren ones cuneate, cleft, crenate."

"Wales and Cumberland; not so common in Scotland. On rocky mountains."

BLE'CHNUM (Hard Fern).—See *Filices*, p. 82.

B. *boreále.*—On heaths and stony places, common.

ADIA'NTUM (Maiden Hair).—Sori oblong or roundish. Indusium membraneous, arising from distinct portions of the margin of the frond, turned in, opening interiorly.

C. *capíllus véneris.*—Frond twice-pinnate. Pinnules alternate, lobed on capillary petioles. Indusium oblong.

Port King, Glamorganshire. Banks of the Carron, Kincardineshire—Professor Beattie. Cornwall, between Hayle and St. Ives—Professor Henslow. Isles of Arran. Wrisbeg. Shore of Loch Bulard—Mr. C. C. Babington.

HYMENOPHY'LLUM (Filmy Fern).—See *Filices*, p. 82.

H. *tunbridgénse.* — Westman's Wood, Dartmoor; rocks, Dunsford Bridge; Becky Fall, Devon—Flora Devon. Killarney, &c.

H. *wilsóni.*—Frond pinnate. Pinnæ semi-pinnatifid, recurved. Lobes serrated. Rach not winged. Receptacle ovate, entire.

Waterfall above Ambleside, Westmoreland—Mr. J. Bowerbank. Finlarig Burn, near Killin, Perthshire—Mr. Wilson.

TRICHOMA'NES (Bristle Fern). — Sori marginal. Fruit on an elongated receptacle, within a cylindric or sub-urceolate monophyllous indusium, which is of the same texture as the frond, opening above.

T. *brevisétum.* — Frond thrice-pinnatifid. Lobes linear, entire. Rach winged. Receptacles urceolate.

Near Killarney and other parts of Ireland. West Indies.

OSMU'NDA (Royal Fern).—See *Filices*, p. 82.

O. *regális.*—In Essex; Great and Little Warley Commons—Mr. R. Castles. Near Farnham—Henry Drummond, Esq. Aberdeenshire and coast of Kincardineshire—Dr. Murray. Banks of the Clyde, eleven and a half feet high—Mr. Stewart Murray. In a boggy place, above Lonesome, near Wotton, six feet high.

BOTRY'CHIUM (Moon-Wort).—See *Filices*, p. 82.

B. *lunária.*—" Deep Dean, near Dorking—Mr. J. Beevis. Shotover Hill, Oxon—Mr. Baxter, &c. Aberdeenshire—Dr. Murray."

OPHIOGLO'SSUM (Adder's Tongue).—See *Filices*, p. 82.—Various parts of Surrey, Kent, Herts, and Hants—Mr. William Pamplin. Near the Ladder Style, Osterly Park; Brentford, Middlesex; and four miles south of Dorking—Mr. J. Beevis.

PILLULA'RIA (Pill-Wort).—See *Marsiliáceæ*, p. 83.

P. *globulifera.* — " Pool between Okeshot Hill and Claremont Park, Surrey—H. C. Watson, Esquire. Marshy ground, between the village of Currie and the Pentland Hills, Edinburgh."

ISOE'TES (Quill-Wort).—Involucre formed by the swollen base of the leaves, one-celled. Seeds angular, inserted upon many filiform receptacles.

I. *lacústris.*—" Leaves subulate, bluntly, quadrangular, formed of four transversely jointed, longitudinal cells."

Extreme North of Wales, North of England and Scotland; in lakes. Floutern Tarn, between Scale Face and Whitehaven —Mr. W. Wilson. Loch Calladar, Aberdeenshire—Mr. W. Brand.

LYCOPO'DIUM (Club-Moss).—See *Lycopodiáceæ*, p. 83.

L. *clavátum.*—" Stem trailing. Leaves linear, incurved, hair pointed. Thecæ (fruit) in naked stalked double spikes. Scales oval, serrated."

" On hill sides, especially in the Northern parts. Heathy ground, above Tring, Herts—Mr. William Pamplin."

L. *annótinum.*—" Stem procumbent. Leaves in five rows, lanceolate, acute, spreading. Spikes simple. Scales broadly oval, imbricated."

Clova, Ben-na-Baird, and Loch-na-garr, Cairngorum, &c.

L. *inundátum.*—" Stem creeping. Branches simple, erect. Leaves and scales linear, acute, curved upwards. Spikes solitary."

Wimbledon Common, Putney Heath, Shirley Common, Surrey; and bogs, near Titchbourne Church, Hants—Mr. William Pamplin.

L. *selaginóides.*—"Stems procumbent. Leaves lanceolate, acute. Spikes large, solitary. Scales oval, deeply toothed.

"Plentiful in the Highlands. Dartmoor, Devon. Coast of Lancashire, near Southport. Near Richmond, Yorkshire—Mr. J. Ward."

L. *alpinum.*—"Stem procumbent. Branches fascicled, flat at top. Leaves and scales in four rows."

"Wales and Scotland, commonly at a great elevation. Down to the coast in Aberdeenshire—Dr. Murray."

L. *selágo.*—Stem erect, dichotomously branched, flat at top. Leaves in eight rows. Thecæ axillary.

On the loftiest of the Grampian mountains. Dartmoor, on lofty rocks. Above Edale Chapel, Derbyshire. Waldron Down, Sussex. Near Bristol—Miss Worsley. Shotover-hill, Oxon—Mr. Baxter.

EQUISE'TUM (Horse-Tail).—See *Equisétaceæ*, pp. 83, 84.

E. *fluviátile.*—Plentiful near London. Hurtwood, Common — Henry Drummond, Esq.

E. *drummóndii.*—"Barren stems blunt, erect, with about twelve branches. Fertile stems, with about five or six prickly-toothed sheaths."

"Discovered by Mr. T. Drummond at Wolf-Hill, the seat of W. Thomson, Esq., near Belfast."

E. *arvénse.*—Fields and meadows, common.

E. *sylváticum.*—"Woods and shady places, chiefly in the North. Cromford Moor, Derbyshire—Dr. Howitt. Near Richmond, Yorkshire—Mr. Ward. Sussex—Rev. G. E. Smith."

E. *limósum.*—Not uncommon, in swampy places, slow streams, &c.

E. *palústre.*—Var. β. (*alpínum*).—Smaller. Upper branches abortive. Breadalbane mountains.

Var. γ. (*polystáchion*).—Upper branches elongated and fertile. About Croydon, &c.; an accidental variety produced by cropping or mowing the plant in the early stage of growth, *i. e.* before flowering.

E. *variegátum.*—"Stems procumbent, rough sheaths, black at top. Teeth few, white, persisting."

"West coast of Cheshire and Lancashire. Barr Sands, Dundee. Wardrew, Northumberland—Mr. Winch."

E. *hyemále.*—"Stem erect, rough, deeply striated. Sheaths short, adpressed, black at each end. Teeth deciduous."

"South Kent—Rev. G. E. Smith. Near Halifax. In a small stream, at the bottom of Grace Dieu Wood, Charnwood Forest, Leicestershire. Below Roslin Castle — H. C. Watson, Esquire. Forge valley, near Scarborough."

N.B.—St. Leonard's Forest, Sussex, may be recorded as a station for *Lycopódium clavátum* and *inundátum*; *Pilulária globulífera*; *Aspídium dilatátum, spinulósum, oreópteris, thely'pteris,* and perhaps *cristátum.*

APPENDIX.

ADDITIONAL LOCALITIES FOR THE LONDON SPECIES, &c.

ALLIUM *ursinum.*—In an old stone quarry, near Warwick Wood, Reigate; and in a wet copse at Wonham Mill; also in shaws, between Buckland and Colley Hill—James Turner, Esq.

CONVALLARIA *majalis.*—Warren, near Kingswood Church; Walton Heath, as in Luxford's Reigate Flora.

POLYGONATUM *multiflorum.*—Albury, under a hedge by the water course; in the field or meadow between the upper gate of the farm-yard and the new church, 1838.

PARIS *quadrifolia.*—With four, five, six, and seven leaves. In Gatton Park, on the right side of the road from Reigate Hill to Merstham, about half-a-mile from the suspension bridge; also in Mr. Crunden's wood, near Reigate.

ORCHIS *ustulata.*—Among the juniper bushes, between Buckland Hill and Colley Hill, as in Luxford's Flora, but not plentiful in 1838.

HABENARIA *bifolia,* or *chlorantha.*—In Tilgate Forest, Sussex, most abundant; slightly differing in size and colour from the (usually) large specimens found on the chalk. A distinguishing mark appears to be desirable.

LISTERA *nidus-avis.*—In a wood, beyond Cold Harbour, Shere. In a wood, on the ridge of hills between Abinger Hall and Denbies, near Ranmer Common.

CAMPANULA *hederacea* is plentiful in Tilgate Forest, a mile or two below Crawley. Also, Forster's CNICUS *pratensis,* or CNICUS *forsteri.*

There are many plants of this thistle with panicled florescence.

ATROPA *belladonna.*—Near stone pits, about a mile from Warwick Wood, towards the east—Peter Martin, Esquire, Reigate. I was informed that it was very plentiful, about two or three years ago, on the Norbury side of Ranmer Common.

THLASPI *arvense.*—Chalky fields, north of Warwick Wood.

Smyrnium *olusatrum.*—Below Reigate, on Cock Shot Hill, left side of the Brighton Road, as in Luxford's Flora.

Leonurus *cardiaca.*—Little London, beyond Shere Heath, right side of the lane, a few yards before reaching the first cottage on the left.

Sagina *procumbens.*—Albury Heath, with five petals, not rare.

EUPHORBIACEÆ.—Page 120.

BUXUS.—Flowers axillary, in clusters. Perianth of four pieces, two of which are smaller than the other two, with one bract at the base; the fertile floret has three bracts. Styles three. Capsule three-celled, with two seeds in each.

B. *sempervirens.*—Leaves oval, retuse, coriaceous, glistering. A small tree. A dwarf variety is extensively used for edging in gardens.

Box Hill, Dorking, common.

POLYGONACEÆ.

POLYGONUM *dumetorum.*—Distinguished from P. *convolvulus* by its smooth, highly polished, black seeds. Clusters of fruit long, conspicuous. Pedicels long and slender. Perianth light green, bordered with broad transparent delicately pink wings. Stem striated rather than angular, and climbing to a considerable height among the bushes.

"In a hedge, plentifully, right hand of the lane leading from Reigate Heath to Wonham Mill"—Luxford's Reigate Flora, from which the preceding description was copied.

"In the hedge, left hand of the road, by the first stream between Reigate Heath and Buckland, where the ground has been recently turned up to form a foot-path.—Discovered last autumn by Peter Martin, Esquire, of Reigate." (From the same.)

OROBANCHACEÆ.

LATHRÆA *squamaria.*—"Chipstead—Miss Hooper. On Chapel Farm, left hand of West Humble Lane, near Dorking, a locality recorded by Ray, and first pointed out to me by the Rev. T. C. Smith. The plants of the above stations (Chipstead and Dorking) bear light pink flowers"—Luxford's Reigate Flora.

PRIMULACEÆ.—See p. 140.

CENTUNCULUS.—Corolla four-parted, tubular. Capsule many-seeded, bursting transversely.

C. *minimus.*—Flowers sessile, axillary, solitary, very minute, pale rose colour, withering on the capsule. Plant one or two inches high, with alternate oval glabrous leaves.

Weybridge Common, Surrey.

GLAUX.—Perianth single, coloured, five-lobed. Capsule globular, five-valved, with about five seeds.

G. *maritima.*—Leaves opposite, fleshy. Stems mostly procumbent. Flowers axillary, sessile, rose-coloured.

Erith, Gravesend, &c., common.

GENTIANACEÆ.—See p. 139.

EXACUM.—Calyx and corolla, each four-cleft, the latter with a spreading limb and swelling tube bearing four stamens. Capsule one-celled, two-valved.

E. *filiforme.*—Stem slender, dichotomous, bearing longish peduncles, and linear lanceolate sessile leaves.

"Tilgate Forest, near a swamp, about mid-way between Pease Pottage Gate and Starve Mouse Plain; on both sides of the road and on a moist sandy hillock."—Luxford's Reigate Flora.

BORAGINACEÆ.—See p. 137.

ANCHUSA.—Corolla funnel-shaped, with a straight tube. Throat closed with convex scales.

A. *sempervirens.*— Leaves oval. Peduncles axillary. Flowers of a beautiful blue.

"North-east corner of Reigate Church-yard, as in Luxford's Reigate Flora."

LABIATÆ.—See p. 132.

SCUTELLARIA.—Calyx two-lipped, one furnished with a scale or ear. Upper lip of the corolla arched; lower trifid.

S. *galericulata.*—Leaves cordate at the base, lanceolate, crenated, wrinkled. Flowers blue. A tall and handsome plant.

In water and watery parts about banks, not rare.

S. *minor.*—Leaves almost entire. Flowers purplish. Plant two to six inches high.

Boggy parts of Hampstead Heath. Bogs about Leith Hill, Shere, &c.

UMBELLIFERACEÆ.—See p. 194.

CAUCALIS (* * *).—Fruit ribbed, bearing on the edges lines of prickles, in which it differs from the fruit of *Torilis*, which is not ribbed, but covered with prickles.

C. *daucoides.*—Leaves twice or thrice pinnatifid. Umbel few-flowered. Involucel of three bracts. No involucre.

Northamptonshire, &c., on chalky cornfields.

C. *latifolia.*—Leaves pinnate, with pinnatifid decurrent leaflets.

Abundant in Cambridgeshire. I cannot hesitate to admit this plant, although I have not met with it, nor has its locality been certified by any of my correspondents. The authorities are unexceptionable.

PEUCEDANUM *officinale.*—Very rare. In salt marshes, coast of Essex—Mr. Jonathan Grubb, in British Flora.

SESELI *libanotis.*—Chalky pastures, very rare. Gogmagog Hills, Cambridgeshire (Ray)—The Rev. Professor Henslow.

BUPLEURUM *falcatum.*—Norton Heath, near Ongar, growing by the roadside for nearly a mile—Mr. T. Corder, in British Flora.

B. *tenuissimum.*—I had fine specimens from my friend Mr. Ralph, gathered on the coast at Portsmouth. (See p. 235.)

ORCHIDACEÆ.—See p. 110.

HERMINIUM.—Perianth semi-erect. Lip without a spur. Stalk of the pollen glandular.

H. *monorchis.*—Radical leaves two, lanceolate. Flowers small green. Plant four to six inches high.

Old chalk pit, Norbury Park, opposite the lower end of Meikleham. This station was shown me by my friend Mr. Pamplin. Perhaps it grows on Purley Downs, near Croydon.

MELANTHACEÆ.—See p. 107.

COLCHICUM.—Perianth tubular, very long, furnished with a spathe. Limb campanulate, six-parted.

C. *autumnale.*—Leaves plane, broadly lanceolate, erect.

" Plentiful in a meadow, left hand of the London road, adjoining the west end of Wray Common. White and purple varieties." —Luxford's Flora.

GRAMINACEÆ.—See p. 93.

CYNOSURUS (* *).—Glumes (outer) equal, awned, with a pectinate involucre (bract).

C. *cristatus.*—Florescence very compact, cylindric.

A slender wiry grass, common on uplands, &c.

CYPERACEÆ. Carex.—See pp. 89, 90.

C. *ampullaceæ* († † †).—Fertile spikes cylindric, long, almost upright. Scales lanceolate. Fruit crowded, globular, inflated. Beak slightly bifid.

" Bogs on Reigate Heath, as recorded in the Botanist's Guide"—Luxford's Flora.

CRUCIFERACEÆ.—See p. 161.

DENTARIA.—Pod tapering. Valves flat, without nerves, separating with elasticity.

D. *bulbifera.*—Stem unbranched. Lower leaves pinnate; upper simple, bulbiferous in their axils.

Woods, rare. Harewood, Middlesex—Mr. William Pamplin.

SAXIFRAGINACEÆ.

PARNASSIA.—Calyx five-parted. Petals five. Nectaries five, cordate, fringed.

P. *palustris.*—Leaves cordate. Cauline leaf amplexicaule.

Common in the North; rare in these parts,—Holme Fen, &c., Huntingdonshire; Roydon Fen—Rev. G. Munford.

CAMPANULACEÆ.

PHYTEUMA " *spicatum.*—Woods, thickets, hedges, and fields recently cleared of wood, in several stations about Mayfield and Waldron, Sussex"—Mr. Borrer, in British Flora.

ULMACEÆ.

ULMUS *carpinifolius.*—Leaves oval, acute, strongly veined, crenated, cordate at the base; shining, scabrous above; smooth below. Branches bright brown, nearly smooth.—Lindley's Syn. (p. 226.)

Four miles from Stratford on Avon, on the road to Alcester—Professor Lindley.

U. *stricta.*—Leaves oboval. Cuspidate, evenly and nearly doubly crenato-serrate, very smooth and shining above; smooth beneath, with hairy axils. Branches bright brown, smooth, rigid, erect.—Lindley's Syn. (p. 227.)

In Cornwall and North Devon—Professor Lindley.

BORAGINACEÆ.

SYMPHYTUM *officinale.*—The red-flowered variety grows near Postford Mills, Albury, by the roadside leading to Chilworth. This variety differs from the common form, in the leaves being rather elliptical at the base, and very much acuminate. Margins quite entire, without any crispness. The floral leaves are in pairs, and similar to the cauline, but smaller. The segments of the corolla are minute and reflexed.

CARYOPHYLLACEÆ.

SILENE *quinquevulnera.*—The Bromley (Kent) station assigned to S. *anglica*, is, probably, a locality of S. 5-*vulnera*. The difference between the two species exists in the petals alone, so far as I have observed. The habit, viscidity, hairiness, leaves, florescence, are similar in both species. In S. *anglica* the petals are more minute, linear, and bifid. In S. 5-*vulnera* the petals are entire, roundish, and marked with the purplish spot from which it derives its name. S. *anglica* is found rarely on the sandy fields south of Albury, Postford Mills and Blackheath.

SCROPHULARACEÆ.

VERONICA *verna?*—The plant described with this title, p. 129, agrees with *agrestis* in its straggling prostrate habit. It agrees with the description of V. *triphyllos* in the petioled, blunt, incised leaves. It produces one central and two or four opposite lateral shoots. The central frequently bears three lax leafy spikes of flowers; and the lateral two each. It corresponds with A. *arvensis* in the florescence and fruit.

V. *agrestis.*—Var. *a*, larger plant than var. *β*, with broader leaves, on rather longer petioles, somewhat lobed, or with unequal incisions.

Var. *β*. Leaves smaller, on rather shorter leafy stalks than var. *a*. Incisions equal.

I observe no difference in the fruit nor in the sepals. In both varieties, or species, the capsules are turgid and shorter than the oval pointed sepals. In var. *β* the pedicels are longer, or longer in proportion to the leaves than in var. *a*.

The plant described as *buxbaumii* is more like var. *β*, than var. *a*, especially in the leaves and pedicels, but it differs much in the fruit and flower; the latter being nearly as large as V. *chamædrys:* the former is not turgid, and very much divaricated.

There is a luxuriant variety of V. *serpyllifolia* not rare here (Albury) in gardens. Prostrate, branching at the base and rooting, with large roundish, somewhat crenated, leaves.

VALERIANACEÆ.

I gathered, in a field, through which the foot-way leads from Handcross to Cow Wood, Sussex, a variety of FEDIA *dentata*, with the calyx remarkably developed into five large fleshy lobes. In some of the florets the corolla is enlarged and herbaceous. The plants are of humbler growth than the common state of F. *dentata*, and it bears three clusters of florets on each of the two branches into which the stem separates.

Var. γ, British Flora?

TRITICUM *loliaceum* is not scarce on the coast between Shoreham and Brighton, with CHRYSOCOMA *linosyris*, CENTAUREA *calcitrapa*, ATRIPLEX *portulacoides*, A. *littoralis*, A. *laciniata*, and A. *pedunculata*? TRIFOLIUM *maritimum* and *stellatum*, SILENE *maritimum*, &c.

A species, or variety, of *Raphanus*, which differs from R. *raphanistrum*, in its perfect smoothness of plant and fruit, and in the pink and whitish petals, grows in the same locality;—also

GLAUCIUM *phœniceum* is found near the turnpike, about a mile from Brighton, on the beach. The *Elaterium* is naturalized about mid-way between Brighton and Shoreham. *Linum angustifolium*? and MEDICAGO *maculata* grow in this locality.

SINAPIS *muralis* near Beeding, Sussex, and between Slinfold and Horsham, near the Mill, by the path across the fields.

ŒNANTHE *peucedanifolia*.—Ditches, between Henfield and Beeding.

Between Henfield and Steyning, in the salt water ditches.

PUCEDANUM *officinale*?—Leaves five-times ternate. Branches three or four-times ditto. Branchlets two or three-times ditto. Leaflets linear, elliptic, thin. Bracts of the involucre few and linear; of the involucel more numerous.

Ditches, near Henfield.

P. *palustre*?—Leaves tri-ternate. Leaflets broad, laciniated, more spreading than the leaves of the former. Umbels more compact. Florets very deep yellow.

In a hedge, beside a cottage, at Poynings, on the road to Henfield.

DAUCUS *maritimum*?—More hispid than D. *carota*, more rigid, not so leafy. Flowers a deep purple; in D. *carota* they are pink.

Beach, Shoreham.

EUPHORBIA *pilosa*?—Slinfold. The only rare plant of this genus, I saw at Slinfold, has an upright leafy stem. Leaves two to three inches, oblong rather than elliptic, hairy. The style of the fruit is densely ggy.

Sparingly, under a hedge, near the church, on the right side of the Rudgwick road.

E. *stricta* (*platyphylla*).—In a hedge, by a small brook in a meadow, half-way between Rudgwick and Slinfold, in going over the fields. E. *exigua* grows abundantly and very luxuriantly in the same place.

Another Spurge, or a variety, grows between Poynings and Henfield, on the left, a quarter of a mile before reaching the Common. It is leafy like E. *pilosa*, but the leaves are not so long, nor hairy, and regularly serrated; it seems between E. *stricta* and E. *pilosa*.

ELATINE *hexandra*.—Bergholt Heath, near Colchester, very rare. I have lately seen a plant of the same, gathered by Mr. Borrer, below Crawley, Sussex.

The following localities of scarce plants were obtained, during a journey for that purpose, in the second and third weeks of August, 1838, chiefly in Sussex and its confines. Crawley (Surrey): PULICARIA *vulgaris*. HYOSCYAMUS *niger*, one mile below ditto, Horsham road, LIMOSELLA *aquatica*, in a pond by the bridge. In a green shady lane, between Rudgwick and Slinfold, GENISTA *tinctoria*, CAREX *pendula*, with other CARICES. ACTINOCARPUS *damasonium*, between Horsham and St. Leonard's Race Course. COMARUM *palustre*, CAMPANULA *hederacea*, and SCUTELLARIA *minor*, in the Forest, the two latter very common even on the heights and rabbit-warrens. EPILOBIUM *angustifolium* grows in few places near Handcross, and in *Mick Mill's* Race, where the PYROLA *rotundifolia* has been recently gathered by William Borrer, Esquire, of Henfield, and others. About three miles from Cowfold, in the forest, about two hundred yards beyond Bane's public-house, at the tail of a horse-pond, behind a wooden rail and four posts, the PILULARIA *globulifera* is found; and, in a dry ditch, a little farther up, among the bushes, ASPIDIUM *cristatum*, as I believe. In Cow Wood, a little way below Handcross, on a rock called Pook Church, the Tunbridge Fern used to grow abundantly; it is now decaying for want of shade and moisture. Near this rock HYPERICUM *androsæmum* and EPIPACTIS *latifolia* were gathered at the same time.

In Henfield Church-yard, the plant described as MENTHA *agrestis* in the London Flora, grows plentifully; more tall and bushy than in Albury Park. It is certainly a distinct species, and rather approaches M. *viridis*, in florescence and habit, than M. *arvensis*. ISNARDIA *palustris* is found, sparingly, on the south side of the bog on Henfield Common; more plentiful on the other side. LACTUCA *scariola* is found about the hedges.

The localities of several marsh and maritime plants, noticed at the same time, have been already recorded.

CUSCUTA *europæa* grows in several patches, adhering chiefly to SCABIOSA *columbaria*, on the Ovingdean side of Beacon Hill, near Brighton. I am indebted to my friend, the Rev. Gavin Smith, of Rottingdean, for this station. On the other side of the same hill grows GENTIANA *campestris*, or a variety of G. *amarella*, with the four-cleft corolla and calyx. The segments of the corolla are not so much rounded as in some plants of this species which I have seen. The two outer segments of the calyx are the larger, but they are rather lanceolate than oval. A very dwarf variety of ERYTHREA grows on these cliffs between Brighton and Newhaven, barely an inch long and very branching. PHYTEUMA *orbiculare* is not scarce towards Newhaven;

it is common on the downs west of Lewes. STATICE *limonium* grows, sparingly, at Newhaven, in the mud; ARMERIA on the cliff.

GENTIANA *pneumonanthe* grows, or rather did grow, near the Wheat Sheaf, about two miles from Handcross, going towards Horsham, in a heathy field, and in the corner next the road, and next the public-house. In a hedge, before the Wheat Sheaf, the Michaelmas Daisy and ANTENNARIA *margaritacea* (GNAPHALIUM) seem well established. Respecting the *Pneumonanthe* and EXACUM *filiforme*, I fear it must soon be recorded, as of Hounslow Heath, Weybridge Common, &c., that they used, formerly, to grow in St. Leonard's Forest.

On Lewes Downs, about two miles west of the town, there is a SPERGULA which I had formerly seen on Clandon Downs, near Guildford, but exceedingly scarce. It has the habit of SAGINA *procumbens;* root leaves fascicled, fleshy, semi-cylindric, grooved and mucronate. Cauline leaves very minute, connate. Stem ascending, filiform, rough, branching. Peduncles short. Sepals fleshy, rough, without nerves. Petals larger than the sepals.

Agrees with S. *nodosa* in character; differs in locality and habit.

The following Exotics are, apparently, naturalized.—

VALERIANA *calcitrapa.*—Walls, about Eltham, Kent.

CANNABIS *sativa* (Hemp).—Bromley Common, Kent; Cambridgeshire; Newmarket, &c.

GERANIUM *striatum.*—Streatham, Surrey, in a hedge near the Common, and also near the White Lion.

LINARIA *purpurea.*—Beckenham, &c.

MOMORDICA *elaterium* seems well established on a bank, by the sea-shore, a little distance from Shoreham, towards Brighton.

MALCOMIA *maritima* and IBERIS *umbellata* are occasionally found growing spontaneously in places where the refuse of gardens has been cast.

ERANTHIS *hiemalis.* — In a wood, or copse, near Hemswell, Lincolnshire, where there was a garden many years ago.

PETASITES *odorata.*—Reigate; about a mile on the right side of the Brighton road. Albury Park.

TRIFOLIUM *incarnatum* and T. *agrarium* are now plentiful in fields about Croydon, Guildford, &c.

NARCISSI.—Several, in a field behind the King's Head, Mill Hill.

COLLOMIA *grandiflora*, and several GILLIAS, have been gathered in places where they were not sown, and are likely soon to be well established, as naturalized exotics.

SOLANUM *tuberosum* (Potato) and S. *lycopersicum.* — The former is common in fields; the latter has been gathered on manure heaps.

MALVA *crispa*, &c.

A considerable portion of these exotic plants are as truly the spontaneous growth of the neighbourhood of London as DATURA *stramonium*, BORAGO *officinalis*, and other reputed British species.

GLOSSARY OF SCIENTIFIC TERMS USED IN THE INTRODUCTION AND FLORA.

Acauline, without a stem.
Achenium, plural Achenia. Akenium.
Acini, small stones in fruit, as grapes, strawberries, &c.
Aculeate, furnished with prickles; from *aculei*, prickles. *See* Rose.
Acuminate, pointed and tapering, as many of the leaves of grasses.
Adnate, or adhering. Anthers are adnate when attached by their whole length to the filament.
Æstival, summer.
Æstivation, the manner in which the petals are disposed before expansion.
Agglomerated, collected in a head; agglomeration or collection.
Akenium, *plural* Akenia, a single-seeded fruit enclosed in a hard pericarp not closely adherent.
Albumen, farinaceous substance usually composing part of the seed enclosing the embryo.
Amentaceous, bearing aments.
Amentum, or Ament, a sort of inflorescence, as in Willows, &c.
Amplexicaule, embracing the stem: used when the base of the leaf surrounds the stem.
Anther, part of the stamen, viz., that which contains the farina or pollen.
Antheriferous, bearing anthers.
Antrorse, teeth or lobes pointing forwards.
Apetalous, without petals.
Apex, the summit.
Aphyllous, without leaves.
Appressed, usually applied to hairs lying flat on the surface of leaves, peduncle, &c.
Arborescent, having a tendency to become a tree.
Arillate, furnished with an aril.
Arillus, aril, an expansion of the placenta from the hilum over the seed or part of it.
Aristate, bearded, as barley, &c.
Articulation, where the leaf is joined to the branch.
Ascending, lower part of a stem leaning on the ground, upper part upright.
Attenuated, becoming slender.
Auriculate, having an ear-like base; usually applied to leaves.
Axil, the angle formed between the leaf and stem or branch.
Axillary, florescence in the axil.

Baccate, berried; when the covering of a fruit is fleshy or pulpy.
Basilar, from the base.
Beak, usually applied to seeds or fruits terminating in a sharp and hard point.
Bidentate, double-toothed.

Biennial, a term employed to designate the duration of plants; viz., such as require two years to reach maturity, and then perish.

Bifid, or cleft, half divided or parted.

Bipinnate, or bipinnatifid, twice pinnate or twice-pinnatifid.

Biternate, twice ternate.

Bivalved, having two valves.

Brachiate, arms or branches usually opposite, nearly at right angles to the stem, and alternately crossing.

Bracts, or Bracteæ, small leaves near the flower (floral leaves).

Bracteate, supplied with bracts.

Branchy, supplied with numerous branches.

Brumal, belonging to winter.

Bulbs, coated, as Onion; scaly, as Lily; solid, as Crocus.

Bulbiferous, producing bulbs, as Crow-garlick, Tiger-lily, &c.

Caducous, soon falling off.

Cæsius, grey-cōloured.

Cæspitose, growing in tufts.

Calcarate, having a spur.

Callous, bare, hardened.

Calycine, applied to the parts of the calyx, as calycine segments, i. e. segments of the calyx.

Calyculate, having bractlets or small leaflets arranged like an additional calyx, as Mallow.

Campanulate, bell-shaped: Bell-flower (Campanula).

Capillary, very slender, like a hair.

Capitate, in a head; applied to florescence, as Scabious, &c.

Cariopse, a small one-celled indehiscent pericarp adhering to the seed, as in grasses.

Carpels, the parts of which compound fruits are formed, as the grains in Butter-cups.

Cartilaginous, gristly.

Catkin. *See* Ament.

Cauline, applied usually to leaves growing on the stem, (*caulis*, a stem.)

Cellular, composed of cells, as the fleshy parts of leaves and fruit, &c.

Chaffy, producing processes like chaff.

Ciliate, from cilia, having hairs on the edge resembling the eye-lashes.

Circinate, curled like a crook.

Cirrhous, having tendrils.

Clavate, club-shaped.

Claws, the taper end of the petal, whereby it is attached to that on which it grows.

Coarctate, closely packed.

Coccous, part of a fruit separating from the remainder without any rupture, as Spurge, &c.

Cochleate, resembling a snail-shell.

Compound, several simple flowers forming one, as in Compositæ, or several simple umbels forming a compound umbel, &c.

Compressed, flattened.

Concave, hollow.

Concrete, growing together into one mass.

Cone, a compound fruit, as pine-cones.

Confluent, uniting with each other.

Congestate, compact. *See* Luzula congestata.

Conglobate, collected into a globular form.

Conjugate, applied to pairs of leaves.

Connate, growing together.

Conniving, or Connivent, close together.

Converging, approaching.

Convolute, rolled together.

Cordate, heart-shaped; applied to leaves, petals, &c.

Coriaceous, leathery.

Corneous, horny.

Corniculate, furnished with horn-like small processes.

Cornute, horned.

Corona (crown), applied to the cup in the corolla of Narcissus, &c.

Corrugate, wrinkled.

Cortical, belonging to the bark.

Corymb, a term applied to the inflorescence when the lower flower-stalks are longer than the upper, and the flowers are all on the same level, as, the Red Valerian, &c.

Corymbous, like a corymb.

Cotyledons, the seed leaves.

Creeping, lying on the earth and rooting.

Crenated, or crenate, notched or scolloped.
Crenulate, slightly notched.
Crest, an elevated appendage to a particular organ.
Crisp, applied to leaves that are curled or waved at the margin, as Rumex crispus.
Cruciate, a term applied to a four-petalled corolla when the petals are at right angles to each other, as, Wall Flower.
Cruciferous, bearing cruciate flowers.
Culm, the stem of grasses, sedges, &c.
Cuneate, wedge-shaped.
Cupule, the cup of an acorn.
Cuspidate, suddenly tapering to a point.
Cylindric, cylinder-shaped.
Cyme, a flat-topped panicle.
Cymous, florescence a cyme.

Decandrous, having ten stamens.
Deciduous, applied usually to leaves which fall off annually.
Declinate, bent or curved downwards.
Decompound, a leaf is thus qualified when twice pinnated; a panicle, when its branches are panicled, as, Sedges.
Decumbent, leaning or lying down; applied usually to stems.
Decurrent, usually applied to leaves the base of which taper down the stem.
Decussated, when two right lines cross each other at right angles, usually applied to leaves, as, Chironia decussata.
Deflexed, turned downwards.
Dehiscent, gaping; applied to the opening of anthers and capsules to emit their contents.
Deltoid usually applied to leaves shaped like the Greek Δ.
Dentate, usually applied to leaves and to the calyx, when the margins bear processes resembling teeth.
Depressed, pressed downwards.
Diandrous, having two stamens.
Dichotomous, when the branches are in pairs.
Dicoccous, fruit with two cocci, as in Galium, Mercury, &c.
Didymous, two united.
Didynamous, having two long and two short stamens on the same flower, as in most of the Labiate family.
Diffuse, scattered, widely spread.
Digitate, applied to leaves shaped like the fingers of the hand, spread out.
Digynous, having two styles.
Dilated, enlarged in breadth.
Dimidiate, halved.
Diœcious, when barren flowers are produced on one plant and fertile on another.
Discoid, applied to a state of florescence in compound flowers, (Compositæ,) when the florets are all tubular, and consequently of equal length; also when anything is dilated into something similar to a disk.
Discus, or disk, is a term applied to the fleshy part of a flower which supports the ovary.
Dissepiment, the partitions of capsules are so called.
Distichous, two-rowed; applied to leaves or flowers in two rows.
Divaricated, or divaricate, a straggling spreading way of growing.
Divergent, having a tendency to spread.
Dodecandria, having twelve stamens.
Dorsal, growing on the back.
Drupe, fruits, commonly called stone-fruits, are drupaceous, as Cherry, &c.

Echinated, prickly, like a hedge-hog.
Elliptic, having the form of an ellipse.
Elongated, lengthened.
Emarginated, having a little notch at the end.
Emollient, softening.
Ensate, or ensiform, sword-shaped.
Endocarp, inner coat of the ovary.
Epidermis, the outer skin of the bark.
Episperm, that which immediately covers the seed.
Equitant, when in vernation the edges of leaves overlap each other.

Eroded, bitten, irregularly dentate.
Etiolated, by being kept from air and light, blanched, as Celery.
Evolved, unfolded.
Exotic, foreign.
Exserted, projecting beyond something, as in the Mints when the stamens exceed the corolla, they are said to be exserted.
Exstipulate, without stipules.

Fæcula, the nutricious powder of seeds, as Wheat, &c.
Falcate, or falciform, formed like a sickle.
Farinaceous, floury.
Fascicles, parcels, or bundles.
Fasciculate, arranged in parcels.
Fastigiate, tapering to a point like a pyramid.
Ferruginous, iron-coloured.
Fibrous, composed of fibres applied to roots, as in grasses.
Filiform, formed like a thread.
Fimbriate, fringed.
Fistular, hollow like a pipe.
Flaccid, feeble.
Flexuose, undulating.
Floral, belonging to the flower; those floral envelopes are the corolla, calyx, and bracts.
Florescence, the manner in which a plant produces its flowers, as in an umbel, capitule, spike, &c.
Florets, little flowers, or those of which compound flowers are composed.
Flosculous, compound flower, composed of many tubular florets.
Foliaceous, having the form of leaves.
Follicle, a sort of capsule or seed-vessel without a dissepiment, as, Monkshood, &c.; the suture to which the seeds are attached being formed by the connexion of the edges of the leafy carpel.
Fornicate, arched.
Frond, the leaves of Ferns, Palms, &c.
Fructification, the parts constituting the flower and fruit.
Frutescent, shrubby.
Fugacious, quickly falling off, as the petals of Poppies, calyx of Ranunculus, &c.
Fulvous, tawny yellow.
Funiculus, the small stalk attaching the seed to the placenta.
Furcate, forked. Bifurcate, two forked.
Fuscous, dark-brown.
Fusiform, spindle-shaped.

Galeate, having a helmet; applied to the upper lip of a ringent corolla.
Gemminate, doubled.
Gemmæ, leaf-buds.
Germ, or germen, a name of the ovary.
Germination, the beginning of vegetation in a seed.
Gibbous, having a swelling, or protuberance, or enlargement.
Glabrous, not hairy (smooth).
Glandular, or Glandulose, furnished with glands, callous roundish appendages, mostly terminating short hairy or bristly processes; Rose, Blackberry, &c.
Glaucous, having a hoary grey colour.
Globose, or globular, like a globe.
Glomerate, or Conglomerate, collected into a round head.
Glumaceous, applied to the floral envelopes of grasses and sedges.
Glume, the floral envelopes of grasses, &c. *See* Glumaceæ.
Graniferous, bearing grains. *See* Rumex.
Granulated, usually applied to graniferous roots. *See* Saxifraga granulata.
Granules, small grains.
Gynandrous, stamen and style combined in one column. *See* Orchis.

Habit, general appearance — climbing, creeping, erect, slender, &c.
Hastate, like a halbert head, usually applied to leaves.
Herbaceous, when the stem is of annual duration.
Hexagonal or hexangular, having six angles or six sides.
Hexandrous, six stamens.
Hexagynia, six styles.
Hexapetalous, six petals.
Hilum, the scar on a seed, marking where it was united to the placenta.

Hirsute, rough with hairs.
Hispid, rough with bristles.
Hoary, with white down.
Horn of a flower, a long subulate process. *See* Linaria.
Husks, dry envelopes of fruits.
Hybrid, partaking of the nature of two species.
Hypocratiform, salver-shaped.
Hypogynous, placed below the ovary.

Imbricated, tiled, laid over each other; as the involucre of Centaurea, &c.
Incised, cut by incisions.
Incrassated, gradually becoming thick.
Incurved, bent inwards.
Indehiscent, not opening.
Indigenous, native.
Indurated, hardened.
Indusium, the membrane covering or inclosing the thecæ of Ferns.
Inflated, blown, swelled as a bladder by inflation.
Inflexed, bending inwards.
Inflorescence, the arrangements of flowers; terminal, unilateral, axillary, panicled, racemous, cymous, corymbous, umbellate, &c.
Infundibuliform, funnel-shaped.
Involucel, the partial involucre of umbellate plants.
Involucre, the bracts under the peduncles of the partial umbels in umbelliferous plants.
Involute, rolled inwards.

Keel, when the midrib of a leaf, &c. is sharp and enlarged outwardly it is said to be keeled.
Kneed, bent like the knee-joint.

Labellum, the mid-lobe of the lip of a labiate or orchidaceous flower.
Laciniate, from lacineæ, segments cut or divided.
Lævigate, or lævigated, smooth.
Lanceolate, lance or spear-shaped.
Lateral, on the side; unilateral, one-sided; applied to florescence, &c.
Lax, loose, not compact.
Legumen, legume, fruit like a pea-pod.
Leguminous, producing legumes.
Lenticular or lentular, lens-shaped.
Leprous, scaly or spotted.
Ligula, the membrane at the top of the sheaths of grass leaves, &c.
Ligulate, strap-shaped.
Limb, the part above the tubes of calyx and corolla in monosepalous and monopetalous flowers, or the part above the claw in the corolla, or the broad part of the leaf above the petiole.
Linear, a narrow leaf with parallel sides.
Lingulate, or linguiform, tongue-shaped.
Loculaments, partitions or cells of a seed-vessel.
Locular, unilocular, a one-celled fruit; bilocular, two-celled, &c.
Loment, a jointed sort of legume falling into pieces when mature.
Lomentaceous, bearing loments.
Lucid, bright, shining.
Lunate, or lunulate, shaped like a half moon.
Lurid, a colour which is purplish, greyish yellow, &c.
Lyrate, lyre-shaped; a term applied to leaves.

Marginal, on the margin.
Medulla, the pith.
Medullary, relating to the pith.
Membranous, or membranaceous, thin and dry, like a membrane.
Midrib, the large vein commencing in the petiole and terminating at the apex.
Monadelphous, having the stamens collected in one parcel in a tube.
Monandrous, having one stamen.
Monocotyledons, plants having one seed-leaf.
Monœcious, having the styles and stamens in different flowers on the same plant.
Monopetalous, having one petal; dipetalous having two, &c.
Monosepalous, having one sepal.
Monospermous, one-seeded.
Mucronate, sharp-pointed.
Multifarious, arranged in many rows.
Multipartite, many-parted.

Muricated, surface covered with short and sharp points.

Nectary, the part of a flower which contains honey; a process.
Nerves, the strong veins of leaves, &c.
Nuciform, like a nut.
Nucule, a little nut, from *nux*, a nut.
Nucumentaceous, bearing nuts.

Ob, inverted; as, ob-oval, inversely oval; obcordate, obversely heart-shaped, &c.
Obtuse, blunt pointed.
Ochrea, a membranous sheath closely investing the stem and petiole. *See* Polygonum.
Ochreous is applied to petioles having an ochrea as above.
Octandrous, having eight stamens.
Octogynous, octogynia, having eight styles.
Officinal, usually applied to medicinal plants, and to such as have been reputed medicinal.
Oleraceous, esculent, from *olus*, a pot herb.
Operculate, furnished with a lid.
Orbicular, or orbiculate, circular.
Orifice, an opening
Ossified, become hard like a bone.
Ova, eggs.
Oval, like a section passing through the longest diameter of an egg.
Ovary, or ovarium, the lowest part of the style is so named, because it contains the immature seeds.
Ovate, egg-shaped.
Ovules, the immature seeds contained in the ovary.

Palate, the mouth of a ringent flower.
Paleaceous, from *palea*, a chaff; abounding with chaff.
Palmate, resembling a hand.
Panduriform, fiddle-shaped.
Panicle, a branching florescence, as in Oats, Poa, &c.
Papilionaceous, having butterfly-shaped flowers, as the Pea.
Papillose, small excrescences like nipples.
Pappus, the crown of the fruit of Compositæ, &c.; it may be downy, chaffy, or scaly.
Parasitical, applied to plants which grow on other plants, as Misseltoe.
Parenchyma, the cellular substance of leaves, fruit, &c. is thus named.
Parietal, attached to the sides or walls of the ovary; applied to the position of seeds.
Patent, spreading, expanded.
Patulous, spreading slightly.
Pectinate, like the teeth of a comb.
Pedicellate or pedicelled, slightly stalked; applied usually to the partial peduncles.
Pedicel, the small flower-stalks. The term pedicel is applied to stalks supporting single flowers; peduncle also to a flower stalk supporting one or several. The footstalk of a raceme is a peduncle; the stalks bearing the individual flowers in a raceme are named pedicels.
Peduncles, the general flower-stalks. This term is applied to stalked flowers, as petiole to stalked leaves.
Pellicle, a thin skin.
Pellucid, transparent.
Pendulous, drooping.
Pentagonal, having five angles.
Pentagynous, having five styles.
Pentandrous, having five stamens.
Pentapetalous, five petals.
Pentasepalous, five sepals.
Perennial, of several years' duration.
Perfoliate, the base of a leaf perforated by the stem.
Perianthium, or perianth: this term is employed when the floral envelope is neither calyx nor corolla, but partaking of the nature and performing the office of both.
Perianthine, belonging to the perianth, *e. g.* perianthine segment means a segment of the perianth.
Pericarp, the seed-vessel; a general term applied to the external covering of fruit.
Perigynous, inserted into the calyx.
Persistent, or persisting, permanent, not falling off.
Petaloid, like a petal.

Petals, pieces of the corolla.
Petalous, bearing petals.
Petiolate, applied to leaves furnished with foot-stalks.
Petioles, leaf-stalks.
Phænogamous, applied to flowering plants, viz., such as are provided with stamens and styles, &c. in contradistinction to cryptogamous, or flowerless plants, which are not supplied with similar organs.
Pinnæ, the primary segments of a compound leaf.
Pinnules, the secondary segments; usually applied to Ferns.
Pinnate, applied to leaves like the Ash, Rose, Tare, &c.
Pinnatifid, when the leaf is divided into lobes from the margin almost to the midrib. *See* Polypodium.
Pistil, the central part of a flower, having the ovary at the base, the style in the middle, and the stigma at the summit.
Placenta, on which the ovules are produced.
Plane, flat.
Plicate, plaited.
Plumose, feathery.
Plumula, the young stem in the embryo.
Plurilocular, many-celled.
Podosperm, a column rising from the base of the ovary, and supporting the seed.
Polyandrous, stamens indefinite, usually above twenty.
Polycotyledonous, an epithet applied to such seeds as germinate with more than two cotyledons or seed lobes. As the seeds of Pines, &c.
Polygamous, when flowers combine the general characters of the Linnæan classes; viz. some bearing stamens only, some styles only, and some bearing both stamens and styles, either on the same or on different plants.
Polygynous, styles indefinite, usually above twenty.
Polypetalous, many petals.
Polysepalous, many sepals.
Polyspermous, bearing many seeds.
Pome, an apple.
Pomaceous, producing apples.
Præmorsa, as if bitten across, e. g. root of Scabiosa succisa.
Prismatic, angled like a prism.
Processes, extensions.
Procumbent, leaning forwards.
Proliferous, bearing numerous young plants or flowers, as the hen-and-chicken daisy.
Prominent, protuberant, enlarging.
Pubescence, down.
Pulverulent, powdery.
Punctate, with pellucid dots.
Pyriform, pear-shaped.
Pyx, a pyxid fruit, i. e. when the capsule opens by a lid, as in Anagallis.

Quadrangular, four-angled.
Quadrifarious, in four rows.
Quadrifid, four-cleft.
Quinate or quinary, in fives.
Quinquifid, five-cleft.

Raceme, in florescence, used to express an arrangement of flowers round an axis, each flower being on a distinct pedicel, as in the Vine, &c.
Racemous, flowering in racemes.
Rach, or rachis, the part of a culm passing through the centre of an ear of wheat, or panicle of oats, or other grassy plant, and to which the florets or seeds are attached; the midrib of Ferns is thus named.
Radiant, or radiate, when the ray florets are spreading, as in Umbelliferæ, Scabiosa, &c.
Radical, growing from the root; often applied to leaves.
Ramifications, usually the subdivisions of branches.
Receptacle, the part on which the organs of fructification rest.
Rectangular, right-angled.
Rectilineal, straight-lined.
Recurved, bent backwards.
Reflexed, bent back, same as Recurved.
Reniform, kidney-shaped.
Repent, creeping on the ground and rooting.

Replicate, folded back.

Resupinate, turned on its back.

Reticulated, when the veins of leaves resemble a net.

Retuse, abruptly blunt.

Revolute, rolled or folded back.

Rhomboid, or rhomboidal, like a rhomb.

Rib, the projecting vein.

Rigid, stiff.

Ringent, applied to gaping two-lipped flowers, as Salvia.

Rotate, a monopetalous corolla with a short tube and a flat limb; as, Veronica, Anagallis, &c.

Rotund, rounded.

Rudiment, an imperfectly developed organ is so called.

Rugose, rough or coarsely wrinkled.

Runcinate, applied to leaves when their lobes are hooked backwards.

Saccate, having a little bag.

Sagittate, shaped like an arrow-head.

Samara, a winged seed vessel, as the fruit of the Elm, Sycamore, &c.

Sarcocarp, the fleshy part of fruit between the epicarp (outer coat) and endocarp, (inner integument) of the cell.

Sarmentous, producing runners or shoots.

Scabrous, rough with asperities.

Scandent, climbing.

Scape, a stem bearing neither branches nor leaves, but flowers only.

Scarious, dry and membranous.

Segments, parts of certain parts, as leaves, calyx, &c.

Semi, half.

Semen, seed.

Sepals, the pieces of which the calyx is composed.

Septa, partitions of the fruit.

Septiferous, bearing septa.

Serrated, or serrate, like the teeth of a saw.

Serratures, teeth of a serrated leaf.

Serrulated, slightly toothed.

Sessile, sitting, without foot-stalks; applied to flowers, leaves, &c.

Seta, a bristle, Setæ bristles.

Setaceous, resembling a bristle.

Setigerous, or setose, bearing bristles, or covered with bristles.

Sheath, the lower part of the leaf that surrounds the stem, as in grasses.

Silicle, the small pod or pouch in several tribes of the Cruciferæ, as the Shepherd's purse, &c.

Silique, the long pod of Cruciferæ, as in the Wall-flower, &c.

Simple, not compound.

Sinuate, applied to an edge or margin of a leaf which bends inwards and outwards forming hollows.

Sori, the little clusters of fructification on Ferns.

Spadix, a spike arising from a spathe, as, Arum maculatum.

Spatha, or spathe, a broad leaf enveloping flowers.

Spathaceous, provided with a spathe.

Spatulate, shaped like a spatula; as Daisy leaves.

Sphacelate, withered.

Sphærical, like a sphere.

Spicate, similar to a spike in appearance, not a true spike, but consisting of sessile spiklets or clusters of florets—i. e. a close panicle.

Spike, flowers sessile on a long rach, as barley, &c.

Spiklets, in sedges and grasses, cylindric or tapering or ovate clusters composing the panicle.

Spines, indurated processes formed of abortive branches, as in the Sloe; or of leaves, as in the Berberry; differing from prickles in being woody and permanent, growing out of the tree or branch; the latter grow from the bark, and are of a corky or cellular texture.

Spinous, full of spines.

Spiniform, like a spine.

Spinulose, or spinulous, provided with small spines.

Spiral, like a corkscrew.

Sporules, in cellular plants, bodies corresponding to the seeds in Phænogamous species.

Stamen, the organ of fructification which bears the anther or pollen-bag; the lower part is named the filament.

Stellate, like a star.

Stigma, the organ by which the style is terminated.

Stipes, or stipe, the stem of Palms, Fungi, &c.

Stipitate, on a short column.

Stipulate, leaves supplied with stipules.

Stipule, or stipules, small leaves at the base of the petiole in certain plants, as in Rosaceæ, Leguminosæ, &c.

Stomata, minute organs in the epidermis, whereby the function of respiration is accomplished.

Stolons, root-shoots, as in Hieracium pilosella.

Striated, (from *stria*) having streaks or furrows.

Style, that part of the pistil between the ovary and the stigma.

Sub, a diminutive, as, sub-oval, somewhat oval.

Subulate, awl-shaped.

Succulent, fleshy.

Suffruticous, slightly shrubby.

Sulcate, furrowed with depressions.

Superior. The ovary is said to be superior when it is distinct from the calyx.

Supra-decompound, more than decompound.

Suture, the line formed by a junction; chiefly applied to capsules.

Syngenesious, expressive of the coherency of organs, especially of the Linnæan character of the nineteenth class, where the anthers are syngenesious, i. e. cohering round the style.

Tap-root, a perpendicular root, as Carrot.

Tendrils, the curling or twining organs by which some plants lay hold on others, as the vine; tendrils are formed usually of abortive leaves.

Terminal, at the top.

Ternary or tertiary, in threes.

Ternate growing in threes; Trifolium.

Testa, the brittle integument of some seeds.

Tetrandrous, having four stamens.

Tetragynous, having four styles.

Tetrapetalous, having four petals.

Tetrasepalous, having four sepals.

Thalamus, the part below the ovary (receptacle).

Thecæ, the organs containing the sporules of cryptogamic plants.

Throat, the inner orifice of a flower. The upper part of the tube of a monopetalous corolla.

Thyrse, a dense panicle; as, Lilac.

Tissue, an exceedingly fine membrane constituting the sides of the cells and vessels.

Tomentose, tomentous, densely hairy.

Toothed, when the margin is divided so as to resemble teeth.

Tortuous, twisted.

Torus. The upper part of the stem or peduncle or pedicel on which are seated the calyx, corolla, stamens and styles; it has the same relation to a simple (single) flower which the receptacle bears to a capitule or head of flowers.

Triandrous, having three stamens.

Trigynous, having three styles.

Trichotomous, branches divided in threes.

Trifid, three-cleft.

Trifarious, in three ranks.

Trilocular, three-celled.

Tripetalous, having three petals.

Triquetrous, three-sided.

Trophosperm, a cord attaching the seed to the placenta.

Truncate, as if cut across.

Tuberculate, covered with little knobs or tubercles.

Tuberous, bearing fleshy roots, like the Potato.

Tunic, a coat.

Tunicated, provided with a coat.

Turbinate, top-shaped.

Turgid, swollen.

Umbels, umbellate, a kind of florescence like the Carrot, &c.

Umbellules, partial umbels.
Umbilicus, the cord attaching the seed to the ovary.
Uncinate, hooked.
Unctuous, oily, glistering as if oiled.
Undulate, waved.
Unguiculate, furnished with a claw; usually applied to petals, as in Dianthus, &c.
Unilateral, one-sided.
Unilocular, one-celled.
Urceolate, pitcher-shaped.
Utricle, a little bladder.

Valvular, or valved, furnished with valves; applied to the parts of a capsule.
Vascular, or vasiform, a sort of tissue.
Ventricose, inflated.
Vernal, of the spring.
Vernation, folding of the leaves in the leaf bud before expansion.
Vertex, the uppermost point or part.
Vertical, perpendicular.
Verticilled, whorled, when more than two branches, leaves, peduncles, &c. are growing round a stem from the same point, they are so qualified.
Vesicles, little bladder-like vessel or excrescences.
Vexillum, a standard; the upper petal of papilionaceous flowers.
Villous, shaggy.
Virgate, twiggy.
Viscid, adhesive.
Viviparous, bearing young plants instead of flowers and seed.

Waved, curled or crisp at the margin, the same as undulate.
Whorls, or verticils, more than two opposite leaves inserted round a stem.
Wing, a membranous border to stems, seeds, &c.

Zones, stripes or belts.

ALPHABETICAL INDEX

LATIN GENERIC AND SPECIFIC NAMES.

T. denotes Tree—S. Shrub—Perennial (herbaceous) is implied when no mark is affixed—A. Annual—B. Biennial. The time of flowering is indicated by 1, fo January—2, February—3, March—4, April—5, May—or 5-6, May, June, &c. When any species is always in flower no figure is affixed. The last series of numbers, exclusive of the paging, correspond to plates in English Botany where the species are engraved.—N.B. The species has the same English name as the genus when no name is expressed.

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ENGLISH INDEX,

WITH THE HABIT OF THE PLANTS AND THE COLOUR OF THEIR FLOWERS.

T. signifies Tree—S. Shrub—A. and B. Annual and Biennial (without any sign Herbaceous and Perennial are understood)—Herb. (herbaceous) denotes that the colour of the flower is the same as that of the plant—Bl. means Blue—Dk. Dark—Br. Brown—Car. Carnation—Or. Orange—P. Pink—Pur. Purple—Gr. Green or Greenish—W. White—R. Red—Sc. Scarlet—Vi. Violet—Y. Yellow.

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[illegible]NTED BY STEWART AND MURRAY, OLD BAILEY.